1.0.0 Recommendations relating to cinemas, theatres, concert halls, restaurants, video-game centres, areas used by the public on Government premises (including conference rooms), public transport.

1.1.0 Introduction

COSH recommendations 1, 2, 3, 4, 5, 6, and 7 call for legislated restrictions on smoking in the areas listed above.

The recommendations are no doubt based on claims that tobacco smoke in the air represents a health hazard to the non-smoker.

Before acting on these recommendations, government would need to be assured that there is a public health risk arising from other people's cigarette smoke. Such an assurance is not available.

This section reviews the literature on environmental tobacco smoke and advocates private policies not legislation in the matter of public smoking.

1.1.1 The claim that exposure to environmental tobacco smoke (ETS) is harmful to the health of nonsmokers has generated a great deal of public concern. Although a review of the scientific literature indicates that this claim has not been proved, it is used by anti-smokers in their efforts to make smoking socially unacceptable and, thereby, to create a "smoke-free" society. The ETS/health issue is so critical to the anti-smoking movement that the Director of the U.S. Office of Smoking and Health has remarked that "of all the issues, this (ETS) is the one that will propel the United States toward a smoke-free society." [1]

According to one sociologist, the program for a "smoke-free" society may be characterized as follows :

> The strategy, quite overtly, is to progressively stigmatize smoking, segregating the smoker in all public places, and eventually to eliminate smoking as a socially acceptable custom. How is this to be made politically palatable? The answer is clear : by suggesting that smoking harms not only the smoker, but various categories of "innocent bystanders." [2]

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1.1.2 The questionable and often contradictory nature of studies concerning ETS exposure and health is largely ignored by the anti-smoker; the goal is to achieve publicity and arouse emotion. This strategy is typified by a statement from a commentator on the proceedings of the Fifth World Conference on Smoking and Health : "Regardless of the ultimate validity of the findings, which remains to be established, studies such as these have brought the issue of passive smoking to the public's attention." [3]

In addition, the issue of non-smoker exposure to ETS has become the means by which anti-smokers seek to enact legislation regulating smoking in the workplace and other public places. Here again, the strategy of using the ETS/health argument to modify smoking behaviour is apparent. For example, the chairperson of a U.S. National Academy of Sciences committee which authored a recent report on ETS remarked that "legislation could also be justified, not because it wil have much effect on the occurrence of lung cancer among non-smokers, but because it may motivate some people either to stop smoking or never to start." [4] Indeed, one reviewer observed that there are even instances in the scientific literature in which calls are made to establish ETS as harmful "as a means to limit smoking." [5]

1.1.3 However, the tactic of using the ETS/health argument to modify smoking behaviour has been criticized in the international press. One columnist for The (London) Times noted that while she agreed in principle with the anti-smoking movement, she could not condone "the lying that accompanies it." She explained : "The lie is the claim that the health hazards of second-hand smoke have been scientifically established." [6] Similarly, a writer for a German publication called the use of the ETS/health argument an "unethical" tactic intended to instill "anxiety in the non-smoker" and "feelings of guilt in the smoker." [7]

Certainly, ignorance of scientific procedures and the inability to recognize faulty research methodology play a role in the controversy on ETS. As one reviewer of the literature wrote in 1987 : [8]

> A pluralistic society such as ours has lobbies. And it is they who have removed the subject of passive smoking from the scientific to the political stage. It would be wrong to input this to bad intentions. Inadequate or biassed occupation with the problem or general insecurity with regard to scientific comprehension, are quite enough.

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Indeed, in another recent review article, a German scientist, Dr. K. Uberla, cautioned that the argument that ETS causes lung cancer in non-smokers may "have serious negative effects on the credibility of epidemiology" and may become an "obstacle" to the anti-smokers' "goal" of the reduction of active smoking.[9] Dr. Uberla based his observation upon a comprehensive review of the studies to date on ETS and lung cancer. He concluded that, at best, the data for establishing an association are "inadequate" and that, consequently, "a causal connection cannot be inferred."

1.1.4 Given the importance of the ETS issue for the anti-smoking movement, the purpose of this section is to review the current scientific literature regarding environmental tobacco smoke and the health of non-smokers. It is intended to identify sources of information and misinformation about ETS in an effort to demonstrate that the weight of the scientific evidence does not justify the claim that ETS causes disease in non-smokers.

2.1.0 <u>Environmental Tobacco Smoke and Health Claims</u>
<u>An Overview</u>

2.1.1 Anti-smokers typically refer to several highly publicized studies as "proof" that tobacco smoke is harmful to non-smokers. The studies most frequently cited are those by Hirayama [10] and Trichopoulos, et al. (1981), [11] who reported that non-smokers exposed to tobacco smoke have a higher risk of developing lung cancer, and White and Froeb (1980), [12] who asserted that non-smokers with long-term exposure to tobacco smoke in the workplace have significantly reduced small-airways function. Still other reports have suggested that children and individuals with lung and heart disease are adversely affected by exposure to environmental tobacco smoke.

In addition, government health officials have issued reports which anti-smokers are using to pressure legislative bodies in the promotion of a "smoke-free" society. In 1986, two such reports in the U.S., one issued by a National Academy of Sciences (NAS) committee to the U.S. Environmental Protection Agency, [13] and the other by the office of the Surgeon General, [14] concluded that ETS exposure is harmful to non-smokers. More recently, the Independent Scientific Committee on Smoking and Health in the United Kingdom issued its report with conclusions similar to those of the U.S. Surgeon General. [15]

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2.1.2 However, critical analyses of these studies and reports by physicians and scientists from around the world, together with other studies which reported finding no association between ETS and human disease, show that such adverse health claims are highly suspect and not justified on a scientific basis. For example, in 1983, under the sponsorship of the U.S. Tobacco Institute, an international group of scientists and physicians met at the University of Geneva to discuss scientific developments relating to ETS. The organizer of the symposium summarized their discussions as follows :

> An overall evaluation based upon available scientific data leads to the conclusion that an increased risk (of lung cancer) for non-smokers from ETS exposure has not been established. [16]

2.1.3 In May of 1983, scientists and epidemiologists who attended a workshop on "Respiratory Effects of Involuntary Smoke Exposure : Epidemiologic Studies" sponsored by the U.S. National Institutes of Health concluded :

> A review of the data from the studies which have been carried out or are in progress which address the effect of passive smoking on the respiratory system suggest that the effect varies from negligible to quite small. [17]

Similarly, organizers of a symposium on the "Medical Perspectives on Passive Smoking" held in Vienna in April, 1984 and co-sponsored by the German and Austrian societies for industrial medicine in cooperation with the International Green Cross, concluded :

> Should lawmakers wish to take legislative measures with regard to environmental tobacco smoke, they will, for the present, not be able to base their efforts on a demonstrated health hazard from environmental tobacco smoke. [18]

2.1.4 Indeed, in the preface to the 1986 reprint of those proceedings published by the International Green Cross, Dr. Joseph Handler, a former Director of the World Health Organisation (WHO), observed that "the question as to whether the conceivable theoretical possibility of a risk (from ETS) calls for preventive measures is not a medical but rather a politico-social one." [19]

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2.1.5 In October, 1986, an international gathering of scientists in Essen, Germany, considered the experimental and toxicological findings regarding ETS.[20] Professor J.G. Gostomzyk, Director of the Health Bureau in Augsbury, Germany, concluded in his review of the proceedings that "so far, even toxicology has not been able to ascertain with any greater degree of probability than did epidemiology that there exists a link between damage to health and passive smoking." [21]

2.1.6 At the conclusion of the International Conference on Indoor Air Quality held in Tokyo, Japan, in November 1987, the chairman of the organizing committee called for more research on the ETS issue, while cautioning against the use of restrictive measures prior to establishing an adequate scientific basis. [22]

2.1.7 In May of 1988, organizers of a symposium on ETS in Austria entitled "Illness Due to Passive Smoking?" issued a press release in which they concluded that "a causal relationship between ETS and illness cannot be established" and that "there is no positive evidence that cancer and other such illnesses are caused by passive smoking." [23]

2.1.8 Other scientists recently have reached similar conclusions. Dr. Philip Witorsch, Professor of Medicine at George Washington University in Washington, D.C., concluded that "a thorough and critical examination of the relevant literature fails to provide compelling evidence that exposure to ambient tobacco smoke produces adverse chronic health effects." [24] Similarly, Dr. Domingo Aviado, a physician and former professor of pharmacology, wrote that his review of the literature "indicates that there is no substantial evidence to support the view that exposure to environmental tobacco smoke presents a significant health hazard to the non-smoker." [25]

Moreover, in a study published in 1986, researchers in the United Kingdom who had investigated what impact ETS has on the health of non-smokers concluded : "Amongst lifelong non-smokers, passive smoking was not associated with any significant increase in risk of lung cancer, chronic bronchitis, ischaemic heart disease or stroke in any analysis." [26]

2.1.9 Given such findings, it appears remarkable that anti-smokers continue to claim that exposure to environmental tobacco smoke is a proven cause of disease in non-smokers. Obviously, this claim carries a great deal of emotional weight even without appropriate scientific support. Therefore, the charges are serious enough to warrant close examination.

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2.2.0 Lung Cancer

2.2.1 Two highly publicized articles published in 1981 are still among the most frequently cited to support the claim that ETS exposure increases the non-smoker' risk of lung cancer. A study of Japanese women by Dr. Takeshi Hirayama reported that nonsmoking wives of heavy smokers have a much greater risk of developing lung cancer than nonsmoking wives of non-smokers. [10] In a study of Greek women, Trichopoulos, et al., concluded that a nonsmoking woman whose husband smokes has twice the risk of developing lung cancer as a nonsmoking woman married to a non-smoker. [11]

Both studies have been widely criticized in the scientific literature. Numerous inadequacies and inconsistencies in the Hirayama study have been pointed out by noted scientists and physicians who have questioned the validity of its conclusions. [8,27-43] Dr. Ragnar Rylander, the organizer of the 1983 University of Geneva symposium on ETS, noted that the study had been criticized for its lack of questionnaire reliability, absence of histological diagnosis, questionable statistical treatment, and failure to examine such factors as air pollution from heating and cooking. [44] A participant at the International Conference on Indoor Air Quality held in Tokyo in 1987 noted, in a published report, that several recent critiques had questioned Hirayama's study for bias in statistical processing, as well as for failures to measure ETS exposure levels and to evaluate and report "dietary and occupational factors known to influence susceptibility to lung cancer." [27] Moreover, two studies presented at the Conference on Indoor and Ambient Air Quality, held at Imperial College in London in 1988, reported that Hirayama had not divided his study population into appropriate age groups. The presenters noted that the risk he reported for nonsmoking wives of smokers disappears when such age bias is removed. [28,33]

It is also worthwhile to look at the Hirayama conclusions from a common sense point of view. It is common knowledge that the typical Japanese adult male spends relatively little time at home. He spends at least two hours a day commuting, two hours eating, nine hours at the office, seven hours sleeping, and more often than not goes on the town with his colleagues after work. Weekends, when he is not working, are often devoted to golfing and family pursuits out-of-doors. In view of this pattern, is it reasonable that the wife could be exposed in significant measure to her spouse's cigarette smoke? Exposure to cooking smoke in her tiny, poorly ventilated kitchen, not to mention dangers from vehicular and industrial air pollution, should be a great cause of concern as, indeed, they should be in Hong Kong.

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2.2.2 Criticisms of the Trichopoulos, et al., study were acknowledged by the authors in the 1983 update of the study.[45] They noted that their research had been "criticized (by ourselves and others) because of the small number of subjects, because several tumors lacked histological confirmation, and because controls and cases were from different hospitals."

Moreover, their findings were inconsistent with another study published that year. In late 1981, Lawrence Garfinkel, an official with the American Cancer Society (ACS), reported the results from a follow-up of the group's long term lifestyle study, involving nearly 180,000 nonsmoking American women divided into categories based on the amount their husbands smoked.[46] By comparing the lung cancer mortality rates of women reportedly exposed to different levels of tobacco smoke, he determined that none of the differences observed were statistically significant and that "compared to nonsmoking women married to nonsmoking husbands, non-smokers married to smoking husbands showed very little, if any, increased risk of lung cancer." Moreover, Garfinkel cautioned that any study based solely upon classifications of the husbands smoking habits could not account total exposure, and that, therefore, the results could be misleading.

2.2.3 Several subsequent studies have claimed to support the reported findings of Hirayama and Trichopoulos, et al.[47-52, 54] Studies reveals that their claims are scientifically unfounded. For example, a report by Knoth, et al., which identified 39 non-smoker lung cancer cases, asserted that exposure to ETS was the "most plausible explanation" for the reported lung cancers. However, the study failed to provide a comparison group as a control population. One reviewer consequently characterized the report as containing "only tentative conclusions based on poor data analyzed by unacceptable methods.[53]

In a 1983 study, Correa, et al., reported an increased risk of lung cancer for non-smokers married to smokers in a southern U.S. state.[54] However, the results were based on only 30 cases and did not take into account occupational, indoor and outdoor exposures or other confounding variables. Furthermore, one of the co-authors of this study later issued a report with contradictory findings for a similar population in a neighbouring state.[55]

2.2.4 In 1985, a published article by two anti-smoking advocates, Repace and Lowrey, estimated that exposure to ETS is responsible for 500 to 5,000 lung cancer deaths a year among non-smokers in the United States.[56] The risk estimates were cited widely in the press prior to the report's publication, perhaps because it was

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incorrectly identified as a study by the U.S. Environmental Protection Agency (EPA). In reality, the report was neither approved nor endorsed by that agency.[57]

The report itself presents two highly theoretical models for estimating risks of lung cancer from ETS exposures. The first model relies upon a "reinterpretation" of the epidemiological studies of lung cancer in non-smokers, and the second provides an estimate for lung cancer mortality from a single study dealing with the Seventh Day Adventists, a religious group known for its vigorous opposition to smoking.

2.2.5 Critics of this approach have pointed out that the estimates are based on errors and "unrealistic assumptions" which result in overestimations of exposure.[58,59] For example, one recent analysis of their model showed that, depending upon the asumptions and input data used, such model estimates are inherently inaccurate and may vary by as much as 300-fold.[60] Another scientist noted that the exposure and dose levels they used are not based on actual measurements, and that actual measurements reported by other researchers range from "ten-to-one-hundrend-fold less than that in the Repace and Lowrey model."[61] Still other scientists have questioned the methods of analysis used in their report.[62-64] They suggest that Repace and Lowrey failed to control for other confounding factors, and that their model did not provide "the very statistical bases of estimation procedures."[61]

Repace and Lowrey's estimate of non-smoker lung cancer risks in the workplace has been criticized by another group of scientist who pointed out that none of the epidemiological studies which examine the relationship between ETS exposure and disease in nonsmoking working women reports a statistically significant increase in risk.[58]

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2.2.6 Additional studies have claimed that the risk for all cancers is increased among non-smokers exposed to ETS. One such study examined a population which was selected from death notices in a northeastern U.S. newspaper.[65] However, analysis of the data reveals that the reported risk disappears when age comparisons of cases and controls are considered.[66]

In a series of papers, Sandler, et al., reported increased risks for lung cancer and cancer of other sites in non-smokers exposed to ETS.[67-69] Yet published criticisms cast serious doubt on these conclusions. One commentator challenged the authors' selection of controls and their use of questionnaire information.[70] Another scientist observed that under one interpretation, the data suggest that exposure to ETS had no effect on overall cancer incidence.[71-72] A third critic called the studies "seriously flawed" and questioned the authors' methods of data collection.[73] Still others challenged their conclusions because the reports had not considered potential confounding variables such as diet, hygiene and lifestyle.[74-75]

2.2.7 With regard to the issue of ETS and overall cancer mortality, a 25 year follow-up study of over 1,000 married couples in Holland reported that "passive smoking was not associated with an increase in total mortality."[76] Although the authors cautioned that the results do not necessarily contradict those which suggest such an association, they added that their findings "were reassuring to the extent that the possible absolute risk carried by passive smoking is probably small."

2.2.8 The complex nature of the scientific data in this area is further illustrated by the mixed results of some studies; that is, certain data in a study may suggest a relationship between ETS and lung cancer while other data from the same study may not. For example, in a report on the preliminary results of a health survey conducted in two urban communities in Scotland, Gillis, et al., noted that of the six lung cancer deaths observed in male non-smokers, four were among those who had reported exposure to ETS.[77] However, no dose

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response relationship was noted for females in the study.

Kabat and Wynder, in a 1984 study of 25 male and 53 female non-smoker lung cancer cases, reported a greater amount of ETS exposure at work for male nonsmoking cases.[78] However, no significant effect was reported for males exposed to ETS at home or for female cases exposed either at work or at home.

2.2.9 In 1985, Garfinkel, et al., published a study of 134 nonsmoking women with lung cancer who were selected from hospital records from 1971 to 1981.[79] Garfinkel, et al., provided two analyses of the same data set which produced apparently contradictory results. While a statistically significant dose response relationship was reported between nonsmoking female lung cancer patients and the number of cigarettes smoked per day by their spouses, no significant relationship was observed between the occurrence of lung cancer in nonsmoking women and the total number of hours per day of exposure to ETS over the last five or 25 years.

2.2.10 Still other studies have observed no significant association between ETS and lung cancer. These include a 1982 study from Hong Kong which reported fewer "passive smokers" among lung cancer patients than among controls.[80] The authors noted that "this finding is at variance with that of Dr. Hirayama's."

2.2.11 Similarly, Koo, et al., studied 200 female lung cancer cases among Chinese women and concluded that ETS exposure in the home or at work had no statistically significant impact on lung cancer incidence.[81] In a second study published in 1987, Koo et al., calculated total ETS exposures at home and at work for their population of nonsmoking female patients. They observed no significant disease trends for any of the lifetime measurements of exposure to ETS.[82]

In two papers published in 1988, Dr. Koo re-analyzed her data set on nonsmoking wives of smokers.[83-84] Her results indicated that wives of nonsmoking husbands had "healthier" lifestyles than wives with smoking husbands; they exhibited higher socio-economic status and had better indices of family cohesiveness and lower frequencies of selected health problems and complaints. An important and statistically significant difference was found in the diets of the two groups. Wives with smoking husbands consumed more processed and spicy foods and ate fewer fresh fruits and vegetables than did wives of nonsmoking men. Koo concluded that such correlates of smoking status "act as important confounders when evaluating health risks among families with smoking husbands."

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2.2.12 In 1985, Wu, et al., reported on data from a study of female lung cancer cases in a large metropolitan area in the U.S.[85] They reported that the lung cancer risk among the 31 non-smokers in the study population was not affected by ETS exposure.

2.2.13 Researchers have recently published results of a study undertaken to investigate the occurrence of lung cancer in an industrial area in Scotland.[86] The authors reported that ETS exposures were not significantly different between the cases and controls in the study; in other words, ETS appeared to play no role in the reported increased incidence of lung cancer in the study population.

2.2.14 In 1986, researchers investigated the potential role of ETS on the incidence of non-smoker lung cancer in England.[26] The researchers observed no significant trends in increased risk for lung cancer patients who reported exposure to ETS. In fact, in some disease categories, more controls than cases reported exposure to ETS.

2.2.15 Perhaps as a result of the failure of individual studies to report consistently significant results, certain researchers have recently begun using another method of statistical analysis which combines the reported results from numerous studies. With this method, called "meta-analysis", they claim to have calculated estimated excess risks for non-smokers exposed to ETS that are 10 to 50 percent greater than those for nonexposed non-smokers. In basic terms, they have reached these broad conclusions or "generalizations" by calculating an average of the relative risks for non-smoker lung cancer cases reported by those studies.[15,87-89]

However, this method of generalization has been criticized for its questionable application to those studies, due to the wide variety in their study designs, population selections, techniques of analysis and their results.[90-92] This method also ignores basic methodologic weaknesses which, according to one recent governmental report, are characteristic of each published study on ETS and lung cancer.[93] It further ignores the fact that the majority of studies considered in the various "meta-analyses" do not report statistically significant increases in lung cancer risks for non-smokers. For example, only two of the thirteen studies considered by the 1986 NAS Report achieved statistical significance.[94] (Although the authors of several studies report no statistically significant risks, they report "positive" trends in their data. However, trends which fail the test for statistical significance are of questionable scientific validity).

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2.2.16 In a recent analysis, Letzel and co-workers considered only those epidemiological studies on ETS which met minimum requirements of scientific quality. The researchers then performed their own meta-analysis on those studies with corrections for misclassification (see discussion below). They concluded that the computed excess risk was negligible and not statistically significant.[92]

Peter Lee, a statistician and epidemiologist from the United Kingdom, has argued that the increased risks reported in various "meta-analyses" are the result of an inherent bias in study design rather than the result of any genuine effect from exposure to ETS.[95-100] Lee presents data which indicate that the reported risks cannot be explained on the basis of either ETS exposure or dose for the non-smoker. It is Lee's contention that the reported "risks" are the result of bias caused by a small number of smokers who are misreported in the studies as non-smokers.

2.2.17 Other kinds of misclassification may contribute to the reported increase in lung cancer risks among non-smokers, according to several scientists. For example, none of the studies on ETS and lung cancer provides direct observational information on ETS exposures. Instead, spouses, next-of-kin or friends are asked to estimate the amount of ETS to which they think the subject was exposed. Such estimates may lead to a kind of misclassification, called exposure misclassification,[101] which has been shown by Garfinkel[79] and Friedman[102] and others[103-106] to lead to improper indices of exposure and incorrect estimations of risk. In Garfinkel's study, for example, relative risks varied from 0.83 and 0.77 when the women with lung cancer or the husband was the respondent, to a risk of 3.57 when a son or daughter responded.[91]

2.2.18 Dr. S. James Kilpatrick, a biostatistician from the Medical College of Virginia, has analyzed another form of misclassification, called differential misclassificiation, which results "from the tendency of respondents to inflate the amount of ETS exposure for lung cancer cases and deflate the report of exposure for controls."[101] Similarly, Dr. Ernst Wynder, President of the American Health Foundation, notes that "relatives of a nonsmoking lung cancer patient are more likely to report passive inhalation exposure on the part of their relative than are relatives of a control patient."[107]

2.2.19 A more subtle form of potential bias is known as "publication bias", which is generated by the failure to publish studies which report negative or weakly positive results.[108,109] Scientists have recently expressed concern over the growing trend in the literature which

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tends to overemphasize (and hence publish) only those studies which report increases in risk.[110,111] Published studies which are thus combined for meta-analyses may not truly represent all investigations on the topic of ETS exposures and lung cancer.

2.2.20 Most of the epidemiological studies on ETS and lung cancer have failed to consider age differences, diet, occupation and exposures to indoor or outdoor pollution as potential confounding elements. The importance of such factors is underscored by four recently published reports, one from Japan and three from China.[112-115] The reports suggest that indoor pollution generated by kerosene heaters, coal stoves, liquified petroleum gas and exposures to cooking oil vapors may be responsible for the increased risk of lung cancer among Oriental women. In addition, relatively few studies have considered ETS exposures outside the home; only four studies sought information about total exposure to ETS from various sources.[26,79,81,82] Interestingly, none of these studies report a significant association between total ETS exposure and lung cancer.

Given these difficulties in interpretation, it is therefore not surprising that an eminent statistician should conclude that "it is unlikely that any epidemiological study has been, or can be, conducted which could permit establishing that the risk of lung cancer has been raised by passive smoking. Whether or not the risk is raised remains to be taken as a matter of faith according to one's choice."[108]

2.3.0 Lung Function/Disease : Adults

2.3.1 The issue of ETS and respiratory disease in non-smokers was raised in a 1980 study by White and Froeb.[12] They measured the small-airways function of smokers and non-smokers and concluded that non-smokers exposed to tobacco smoke at work for 20 or more years had reduced function of the small airways compared to non-smokers not so exposed. Similarly, in 1983, French researchers reported that nonsmoking spouses over 40 years of age who were married to smokers exhibited decreases in pulmonary function compared to nonsmoking spouses of non-smokers.[116]

The White and Froeb study has been criticized for a number of reasons.[117-119] For example, a physician at a U.S. medical school questioned the authors' use of carbon monoxide as an index of smoke exposure, contending that they "do not have reliable estimates of the smoke exposure in the environment of their non-smokers" because it is not unique to tobacco smoke.[120]

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Based upon his own analysis of the White and Froeb study, a British reviewer concluded that the authors' findings "relate to an index which is contentious and certainly not an accepted reliable indicator of an increased health risk."[34] White and Froeb themselves noted that the average values of the pulmonary tests of non-smokers exposed to tobacco smoke "were not notably different" from the values suggested as normal by a specialist in this area.[121]

2.3.2 Perhaps the most telling criticism of the study was voiced by Dr. Michael Lebowitz of the University of Arizona at an annual joint meeting of the American Lung Association/American Thoracic Society and in a subsequent letter published in the U.S. Congressional Record.[122-123] During a forum at the ALA meeting, Dr. Lebowitz stated that he had concluded, from his own extensive review of the study and from an interview with White, that the study was "improperly designed" from an epidemiological point of view. He said that there were problems "inherent in the study," including the selection of the study group and the proper measurement of smoke in the workplace. Dr. Lebowitz also expressed concern that the statistical significance of the data appeared to depend on the unexplained omission of data for 3,000 people who were originally included in the study. Based upon these considerations, Dr. Lebowitz urged that the study not be used to support the claim that environmental tobacco smoke affects the lung function of adults in the workplace.

In a paper presented to the 1984 Vienna Symposium, Dr. Lebowitz again took issue with the White and Froeb study. He wrote:

> Even with a biased population, poor study design, and incorrect statistical evaluation, there were no clear cut, consistent, medically meaningful differences between passive smokers and groups of non-smokers; a corrected statistical analysis strengthened this conclusion.[124]

Dr. Lebowitz also questioned the finding of the 1983 French study which reportedly showed significant differences in lung function in one part of the study population, although no significant differences between exposed and nonexposed non-smokers were reported in the population as a whole. Dr. Lebowitz noted that since the "healthiest" population in the study lived in the most polluted areas, the study may have been flawed due to biased population selection and testing or other confounding factors.[124]

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2.3.3. In addition, neither the White and Froeb nor the French study is consistent with other research on lung disease and lung function in non-smokers. For example, a 1984 study of 1,351 German office workers reportedly found no effect on pulmonary function among exposed non-smokers.[125] In a 1988 update of the study, the investigators noted that "there is no evidence that average everyday passive smoke exposure in the office or at home leads to an essential reduction of lung function in healthy adults."[126] Canadian researchers reported that a group of healthy young adult non-smokers showed "no consistent reaction" of static lung volumes and insignificant changes of other lung function measurements when exposed to tobacco smoke.[127]

2.3.4 Numerous studies of individuals exposed to ETS in the home also present conclusions which are contrary to both the White and Froeb and the French study. In 1981, several epidemiologists at the Johns Hopkins University School of Medicine reported that in a group of 1,724 adults, the frequency of respiratory symptoms in non-smokers was not associated with the number of smokers in the household.[128] Nor was the frequency of impaired ventilatory function significantly higher if there were smokers in the home. However, their analysis did show that among men who never smoked cigarettes, gas cooking was definitely associated with impaired ventilatory function, even when corrected for multiple comparisons."

2.3.5 Other studies on pulmonary function, respiratory disease and environmental tobacco smoke deserve special mention. In 1983, for example, Jones, et al., reported that in a case control study of several hundred nonsmoking women from a U.S. study population, there was no significant association between decreases in lung function and exposure to ETS in the home.[129] Coordinators of an epidemiologic study of obstructive lung disease in Arizona reported finding no effects from ETS exposures in their adult study population.[130]

In a study of 376 families, Yale University scientists reportedly found no evidence that environmental tobacco smoke affected either lung function or symptoms in adults.[131] More recently, in a Canadian study on the effect of indoor and outdoor pollutants on the lung function of housewives, researchers concluded that ETS exposure did not influence lung function but that gas stove usage played a role in average lung function decline.[132]

2.3.6 It is not surprising, therefore, that the participants at the U.S. National Institutes of Health workshop on ETS exposure concluded, after a review of the data from on-going studies on lung function and disease, that a possible effect from environmental tobacco smoke "varies from negligible to quite small."[17]

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2.4.0 "Compromised" Individuals: Lung Disease

2.4.1 Many believe asthmatics to be particularly vulnerable to various environmental influences, including ETS. A 1981 study by Dahms, et al., for example, reported decreases in the pulmonary function of several asthmatics exposed to environmental tobacco smoke.[133] However, the study suffers from several obvious limitations. The subjects, for example, were challenged under the unrealistic experimental conditions of exposure to high levels of smoke in an enclosed smog chamber. In addition, as the authors themselves noted, their experiment lacked proper controls and the effects observed may have been due to psychological, not physical, factors.

2.4.2 Contrary to the reported findings of Dahms, et al., a Canadian group who examined the reactions of asthmatics to levels of tobacco smoke typically found in public places observed no systematic lung changes after such exposure.[134] Later research by the co-authors of this study supports this conclusion. They reported that respiratory data collected from a group of asthmatic volunteers exposed to tobacco smoke "do not suggest that asthmatic subjects have an unusual sensitivity" to such exposure.[135] Although several volunteers claimed that they experienced wheezing and tightness in the chest due to the exposure, the researchers found that the "physiological data give little support to the concept of a subgroup with particular sensitivity." They noted that these reactions probably were due to the "suggestibility" of the subject.

2.4.3 The difficulty in determining the impact of psychological responses in such studies is clearly demonstrated by the results of two reports from Australia. Although a 1985 report suggests that short term ETS exposures are capable of inducing reactions in asthmatics,[136] an earlier study tends to support the theory that psychological reactions may partially explain symptoms observed during such exposures. In the latter study, Ing, et al., reported that while asthmatics exposed to tobacco smoke complained of subjective symptoms, no significant objective evidence of airways obstruction was observed.[137]

2.4.4 Another report on results from a large scale epidemiological study in the U.S. suggests that environmental tobacco smoke in the home does not affect symptoms or pulmonary function in either children or adult asthmatics, although dust and pollen in the home apparently can provoke such effects.[138]

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A group of researchers from Yale University, in a recently published study on this issue, studied the short term effects of ETS exposure on a group of young asthmatic patients.[139] They observed no changes in lung flow rates and concluded that such exposures present "no acute respiratory risk" to asthmatics.

2.5.0 Heart Disease

2.5.1 Epidemiologic studies assessing ETS and the risk of cardiovascular disease which appear in the literature show no clear trends. Although two studies reported a small, but statistically significant, increase in heart disease risk among nonsmoking wives of smokers,[140,141] another generated both statistically significant and insignificant results.[142] A fourth study reported a statistically insignificant increased risk,[143] and two additional reported no significant association between heart disease and ETS exposures.[26,77]

2.5.2 In 1984, two German researchers reviewed the available studies on the roles of carbon monoxide (CO), nicotine and other tobacco smoke components in the possible etiology of coronary heart disease in non-smokers. The authors concluded that "there is little evidence" to suggest that substances found in ETS "may adversely affect the cardiovascular system." They also stated that "neither CO nor nicotine is likely to play a role in the development and progression of coronary heart disease in those concentrations normally found in passive smokers."[144] In addition, scientists and physicians who examined the issue of carbon monoxide at the 1983 Geneva Symposium on ETS agreed that "carbon monoxide from environmental tobacco smoke is not important from a health point of view."[16]

2.6.0 "Compromised" Individuals: Heart Disease

2.6.1 The issue of ETS exposure for individuals with pre-existing heart disease arises primarily from a 1978 study by Aronow who concluded, on the basis of examining ten heart patients, that such exposure hastens the onset of heart pain during exercise.[145]

However, the Aronow experiment has been repeatedly and severely criticized by a number of authorities, including the U.S. Surgeon General.[146] Dr. Edwin Fisher, a professor of pathology at the University of Pittsburgh, stated that the study must be "evaluated in light of the fact that the end point of the study was highly subjective, that the stress factor was not controlled, and that a sham smoke or other environmental impingement was not used. In other words, not only was the sample small, but the scientific design was exceedingly poor."[147]

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After reviewing the Aronow study, a Canadian professor of medicine who otherwise maintains that tobacco smoke exposure may be harmful wrote that although the patients showed some increase in carboxyhemoglobin (COHb) or CO blood levels, "the end point (the reported onset of anginal pain) is necessarily subjective."[148] He explained, "it is difficult to imagine that enclosure in a very smoky room did not have some emotional impact upon patients who were liable to angina, and the psychological disturbance may have done more to hasten the onset of symptoms than the increase of blood COHb."

2.6.2 In addition, other researchers in the area have been unable to replicate or duplicate Aronow's reported findings. For example, researchers from Great Britain measured objective responses of a group of heart patients to ETS and found no adverse physical response to any level of exposure.[149]

Other serious questions have been raised regarding the underlying validity of Aronow's work. In 1983, after one U.S. governmental agency reported that Aronow had falsified data in a study it had sponsored, another agency, the Environmental Protection Agency (EPA), conducted an independent review of several of Aronow's studies, including his work on heart disease and CO. The EPA concluded that, because of several irregularities in the study, it could no longer rely on his research to formulate environmental standards.[150-151]

2.7.0 Lung Function/Disease: Children

2.7.1 Perhaps no claim regarding ETS is as capable of provoking strong feelings as the charge that parents who smoke may harm the health of their children. While the issue of parental smoking is laden with emotion, the scientific basis for the claim is difficult to interpret. For example, while one study examines respiratory symptoms or illness such as coughs and colds by questionnaire responses from parents,[152] another measures lung function with special equipment at a school or health facility.[153] In the United States alone, according to one report, this has led to a situation in which studies of ETS and the respiratory system are being "carried out by at least three different groups, are employing different populations and methodologies and have led to varying conlusions."[17]

2.7.2 Such studies, each with a different sample size, data collection method and analysis, tend to yield factually incompatible and contrary conclusions. For instance, although certain studies have reported adverse findings,[13,14,154-170] others have observed no significant relationship between parental smoking and respiratory illness in children.[131,152,171-181] After a

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five year study of over 400 children, for example, Dutch researchers concluded there was "no evidence" that parental smoking had an appreciable effect on respiratory symptoms in school children.[176] A similar conclusion was reached by a group of U.S. researchers, including a critic of smoking, who found "no significant relation" between parental smoking and respiratory symptoms in a study of nearly 400 families with 816 children in three cities.[131]

2.7.3 Moreover, the authors of studies reporting adverse effects from ETS exposures among children concede that their conclusions must be viewed with caution because of numerous confounding factors. For example, one group of British researchers acknowledged the possible influence of factors such as cross infection in the home and genetic susceptibility to childhood respiratory illness and symptoms.[158,159] More recently, researchers in Hong Kong reported "a highly significant correlation between the frequency of respiratory illnesses" of mothers and their children.[182]

Others have conceded that the reliance on questionnaires for information about respiratory symptoms casts doubt on the findings. In one study which reported a significant association between parental smoking and respiratory symptoms, for example, it was noted that even "slight changes" in the way the questions were phrased could result "in substantial differences in the type of responses one obtains."[160] Similarly, another study observed that there was a significant difference in the respiratory symptoms reported depending on which parent completed and the questionnaire.[168]

2.7.4 The importance of such confounding factors was given special consideration in the report from the workshop on ETS sponsored by the U.S. National Institutes of Health.[17] Among the many factors listed in the report were types of heating used, socio-economic status and other variables affecting household conditions, including the number of residents, and demographic and medical characteristics of the study population, such as age, parental symptoms and annoyance responses. The report cautioned "that any study which ignores them will be seriously flawed." The relevance of such factors in affecting the outcome of research on parental smoking is supported by a number of reports which have shown that the use of gas stoves in the home may be independently associated with childhood respiratory disease.[138,174,183-187]

2.7.5 Other confounding factors independent of parental smoking have been reported recently in the medical literature. For example, studies in the United Kingdom have identified damp housing[179,188] and father's occupation[189] as potential explanatory factors for the

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occurrence of respiratory illness in children. Other recent studies have identified outdoor air pollution,[190,191] infections transmitted during day-care attendance[192] and the use of kerosene heaters in the home[193] as risk factors for childhood respiratory disease.

2.7.6 The contradictory nature of findings on the issue of parental smoking is also apparent in the growing number of studies examining the relationship between partental smoking and children's respiratory or lung function. Although several reports have claimed that parental smoking results in decreased pulmonary lung function in children,[156,160,170,194-200] others have not,[131,201-204] including those of a group of researchers who have published a series of studies on this subject.[130,138,153,205] In 1982, for example, the latter research group showed that a comparison of body size with lung function eliminated any reported correlation between parental smoking and children's lung function.[153] Two years later, a reanalysis of families from their study group again showed that "parental smoking did not have a significant effect on children's pulmonary function; smoking habits of others in the household (predominantly siblings) did not have any effect either.[130]

2.7.7 Thus, claims that parental smoking plays a causal role in the development of respiratory symptoms and reduced lung function in children are not scientifically justified. Such claims are typically based upon a single study of a selected symptom (such as cough or wheeze). These kinds of studies invariably fail to consider nutrition, health habits of the family or other lifestyle variables. Similarly, studies which report reduced lung function in children of smoking parents fail to address the issue of socio-economic status or the potential role of genetic and family traits in pulmonary function capabilities.[204] Moreover, the reductions reported in the literature are small and of uncertain clinical or biological significance, and are contradicted by a number of studies which reportedly have observed no effect of parental smoking on children's lung function.

2.8.0 Allergy

2.8.1 Although some individuals are annoyed by the sight and smell of tobacco smoke and a few even report experiencing irritation, the existence of human allergens in tobacco smoke has not been established scientifically. This is an extremely important point in the ETS debate because those seeking to ban smoking in public places often do so by claiming that non-smokers are "allergic" to tobacco smoke.

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However, a number of research groups have been unable to conclude that a tobacco smoke allergy in humans exists.[206-209] In 1980, for example, a group of researchers noted that "direct evidence that tobacco smoke is immunogenic (capable of evoking a specific response) in man is yet to be documented.[210] A recent report by this same group affirms this conclusion.[211]

2.8.2 Claims about tobacco allergy stem primarily from studies in which tobacco leaf extract has been reported to cause allergic skin responses in some people, usually in those who already experience allergic reactions to other substances such as weeds.[212-214] However, as an English immunologist pointed out, there are "great difficulties" in determining whether positive reactions to tobacco leaf extracts are relevant to clinical responses to tobacco smoke.[209] Although he noted that there may be substances in tobacco smoke which could "theoretically" act as such agents, he concluded that "there is no proof that the specific sensitization to tobacco smoke exists." Recent research affirms this point. Scientists reported in 1988 that tobacco leaf sensitivity was not associated with decreased pulmonary function in allergic asthmatics.[215]

2.8.3 It has also been hypothesized that tobacco smoke is capable of provoking asthma as an allergic reaction.[216,217] However, a Swedish specialist concluded that such results are not proof of a tobacco allergy because the studies, which used tobacco extracts, did not differentiate between non-specific and true allergic reactions in evaluating the results of skin tests and bronchial provocation.[218] Consequently, he stated, "for the present, the question as to whether allergy to cigarette smoke exists or not should be kept open."

2.8.4 Certainly, there appear to be people who may be sensitive to tobacco smoke, but personal annoyance and emotional reactions should not be confused with genuine allergic reactions.

In many cases, the individual may be responding to high room temperatures, lack of ventilation, or even to the mere sight of tobacco smoke. Indeed, Dr. John Salvaggio, the director of an allergic disease center in the U.S., has suggested that reported reactions to tobacco smoke may be irritative rather than allergic.

After reviewing the studies on the allergy question, he concluded that "there is no proof that tobacco smoke is allergenic in man."[219]

2.8.5 Accordingly, it is not surprising that researchers at the Mayo Clinic failed to find any evidence of tobacco smoke allergies in their tests of subjects who

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considered themselves allergic to tobacco and tobacco smoke.[220] It has been pointed out in other studies that people who claim to be "smoke sensitive" did not react more frequently to tobacco leaf or smoke extract than those who are "smoke resistant."[221]

2.8.6 On the basis of these data, it must be questioned what people really mean when they say they are "allergic" to tobacco smoke. They may simply not like the sight and smell of tobacco smoke and interpret this to mean that they are "allergic" to environmental tobacco smoke. But, as has been pointed out, such personal reactions should not be regarded as true tobacco smoke allergies.

2.9.0 Sick Building Syndrome

2.9.1 Advocates of smoking restrictions in the workplace commonly argue that ETS exposure gives rise to a number of complaints, including headaches, nausea, coughs, sore eyes and breathing difficulties. However, recent research indicates that this complex pattern of symptoms, the so-called "sick building syndrome", commonly occurs in modern office buildings whether or not smokers are present.[222-224]

2.9.2 Canadian researchers attending the 1983 University of Geneva symposium on ETS reported on their extensive review of over 150 indoor air quality evaluations of office buildings compiled by U.S. government agencies, universities and others.[223] After an examination of the data, the authors concluded that smoking did not significantly affect either indoor atmospheres or the frequency of worker complaints and symptoms:

> The review of available studies does not provide any objective evidence that either pollution levels or patterns of health related complaints differ in some remarkable way between locations with or without smoking restrictions.

They did observe that "inadequate" ventilation creates conditions "where discomfort and illness result irrespective of whether or not smoking is permitted." The researchers reaffirmed their findings in a report published in 1987.[225]

2.9.3 Similarly, in a review of 203 air quality investigations of government and business offices, schools and health care facilities by the U.S. National Institute of Occupational Safety and Health (NIOSH), U.S. government researchers concluded that tobacco smoke played a contributing role in only four of the buildings investigated.[222] A large majority of all complaints were traced to general building contamination and inadequate ventilation.

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2.9.4 In 1988, a representative of a firm specializing in the maintenance of office air conditioning and heating systems reported on 233 individual indoor air quality investigations of public and privately owned office buildings.[224] As in the NIOSH investigations, ETS was implicated in only 4 percent of the buildings investigated. He stated that the majority of indoor air quality problems in modern office buildings may be traced to inadequate fresh air circulation and to poorly maintained ventilation systems which act as breeding grounds for fungi, bacteria and other contaminants. He also suggested that visible tobacco smoke ought to be considered a symptom, not a cause, of general indoor air quality problems, in that ETS is often the only visible sign that ventilation problem exists.

It is therefore understandable, given the easy recognition of ETS, that persons experiencing sick building symptoms may blame ETS as the cause. Indeed, Canadian researchers have verified that the mere visibility or presence of tobacco smoke may provoke claims that ETS is the cause of reported symptoms and complaints.[226]

2.9.5 Between November and December 1988, ACVA Pacific Pty Ltd. carried out an air quality investigation into more than two million square feet of air conditioned office premises in Hong Kong with a total occupancy of about 14,000 persons. The studies conclude that the major problems for these buildings are inadequate ventilation and filtration and inadequate hygiene standards. In particular, carbon monoxide levels of most buildings reflect the levels that prevailed outdoors. There is a widespread presence of several species of fungi known to cause allergies to sensible staff. The contribution of environmental tobacco smoke to indoor air pollution is insignificant. The studies show once again that the problem of ventilation or air quality lies elsewhere, but not with environmental tobacco smoke.

2.9.6 Thus, not only is ETS erroneously labeled the "cause" of worker discomfort in "building illness" situations, its perceived presence may even heighten anxiety about the safety of an individual's environment. This, of course, adds impetus to the movement for smoking restrictions in the workplace. However removal of ETS through smoking bans may serve only to divert attention from more basic, underlying indoor air quality problems.

3.1.0 <u>Environmental Tobacco Smoke and Indoor Air Quality</u>

3.1.1 Anti-smokers often claim that ETS is a major source of indoor pollution in order to support their argument that ETS exposures harm the health of non-smokers. However, the scientific literature indicates that, except under experimental or other extraordinary conditions, ETS does

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not have a significant influence on the quality of indoor air.[227]

The claim that ETS is a significant source of indoor air pollution (and, as such, a hazard to health) is based upon several unwarranted assumptions and misrepresentations of the scientific data. This section will provide an analysis of the ETS/indoor air quality question. The nature of ETS, its constituents, its contribution to indoor air, and the methods employed to measure exposure to it will be addressed.

3.2.0 Sidestream Smoke

3.2.1 It is frequently claimed that sidestream smoke, or the smoke from the burning end of the cigarette, contains much higher amounts of certain constituents than mainstream smoke, or the smoke inhaled by smokers. Such a claim implies that a non-smoker has an increased risk of disease because of his exposure to sidestream smoke, which has more allegedly "toxic" or harmful constituents than smoke inhaled by the smoker. However, this argument is extremely misleading for several reasons, but most notably because it fails to take into account that sidestream smoke is immediately diluted in the surrounding air. This diluted sidestream smoke is more accurately called "ETS".

The impact of dilution on sidestream smoke in room air cannot be overemphasized. Scientists have estimated that under normal, realistic conditions, the quantity of various constituents in ETS are only a tiny fraction -- from 1/100th to 1/1000th -- of those found in mainstream smoke.[228]

3.2.2 The potential toxicity of ETS was recently assessed in a number of studies.[229-232] These studies typically tested the body fluids of non-smokers exposed to ETS for mutagens, or substances capable of altering the genetic structure of cells. Although it can be argued that the scientific literature on this subject is very limited, and that the laboratory tests employed are crude, the studies reported no mutagenic activity in the body fluids of non-smokers exposed to ETS.

3.2.3 Animal inhalation experiments using sidestream smoke or constituents of sidestream smoke are also inconclusive.[233-234] German scientists exposed rats and hamsters to very high levels of sidestream smoke during a 90-day inhalation experiment.[233] The researchers reported no significant physiological effects on the tissues of the animals. In his comprehensive review of the literature on suspected pulmonary carcinogens, Dr. Domingo Aviado observed that none of the constituents in sidestream smoke which have been identified as potentially carcinogenic has induced pulmonary cancer in

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animals under experimental conditions. [234]

3.2.4 Anti-smokers often refer to comparisons of sidestream and mainstream smoke constituents, or sidestream to mainstream smoke ratios, to support their claims about ETS. (A ratio here means the number obtained by dividing the amount of a constituent in sidestream smoke by the amount of that same constituent in mainstream smoke. For example, a ratio of 10 for nicotine would indicate that there is 10 times as much nicotine in sidestream as in mainstream smoke.) However, such a ratio is derived from laboratory experiments which usually employ smoking machines and experimental chambers to measure samples taken from the burning ends of cigarettes. Given these conditions, it is not surprising that some levels of sidestream smoke constituents may be greater than those in mainstream smoke. Moreover, as mentioned above, these experimental techniques do not take into account the impact of dilution which occurs under more realistic settings. Nor do they take into account the fact that even slight variations in the moisture content of tobacco or the porosity of the cigarette paper may greatly affect the reported ratios. [228]

3.2.5 Thus, it is both inappropriate and misleading to suggest that sidestream smoke is equivalent to ETS and that, under ordinary conditions, the non-smoker is exposed to the levels of constituents reported in sidestream smoke.

3.3.0 Constituents of ETS

3.3.1 A number of constituents typically have been cited in the literature to demonstrate the contribution of ETS to the indoor air. These include carbon monoxide, particulates, nicotine, nitrosamines and others. However, the use of one or any combination of such constituents to determine ETS levels presents many problems. For example, although analytic and sampling methods continue to improve, there is at present no completely satisfactory and uniform procedure for measuring ETS. [235-236] Moreover, although the findings of studies which measure constituents in experimental conditions (e.g., in unventilated smog chambers) are cited to dramatize the potential effect of ETS on indoor air, they have little, if any, similarity to those studies which measure ETS in realistic settings. And finally, with the exception of nicotine, none of the constituents which have been used as substitute measures for ETS are characteristic of ETS alone. Other sources, such as heaters, stoves and furnishings, generate substances at levels greater than those found in ETS.

3.4.0 Carbon Monoxide

3.4.1 The scientific literature on carbon monoxide (CO) from

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environmental tobacco smoke contains numerous examples of studies conducted under unrealistic conditions. For instance, in one such experiment, 80 cigarettes and 2 cigars were burned during a 78-minute period in a small unventilated simulated conference room.[237] In another case, 9 cigarettes were smoked one after another in an unventilated automobile.[238] Not surprisingly, the levels of CO measured in these unusual situations were extraordinarily high. Regrettably, studies of that sort are often cited as conclusive evidence of the impact of ETS on ordinary room air.

3.4.2 On the other hand, when carbon monoxide from ETS has been measured under realistic conditions, its contributions have been determined to be minimal.[239-246] Most recently, scientists in the United Kingdom monitored CO and other constituents in over 3,000 locations throughout the country.[246] They reported that carbon monoxide levels did not differ significantly between smoking and nonsmoking environments. Putting such studies into perspective, Dr. Duncan Hutcheon, a professor of medicine who has reviewed the literature, noted : "Environmental studies suggest that tobacco smoke has little impact on the CO content of the room air except under highly artificial conditions."[247]

3.4.3 What then are the sources of CO in public places? Research has shown that the main sources in the outdoor urban environment are motor vehicles and industrial processes,[248] and that indoor levels are affected by these outdoor sources, mainly through ventilation, and by numerous activities such as cooking and heating. In fact, studies have indicated that gas stoves in kitchens and heating units are often major sources of CO in homes.[249-251]

3.4.4 After their review of such studies, participants at the Geneva symposium on ETS concluded that CO from environmental tobacco smoke "is not important from a health point of view."[16] Similarly, researchers from the Lawrence Berkeley Laboratory in the U.S., who are otherwise critical of tobacco smoke, concluded that "based on theoretical and empirical results, CO sidestream emissions from cigarettes have often been overemphasized."[252]

3.5.0 <u>Particulates</u>

3.5.1 A paper published in a 1980 issue of Science magazine, in which the authors reported the results of their efforts to measure particles or particulates in the air of smoking and nonsmoking areas, is often cited to support the claim that ETS is a major indoor pollutant.[253] The authors, Repace and Lowrey, contend that the levels of particles they observed in the smoking areas were much higher than in the nonsmoking

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areas. However, their study results are inconsistent with many others. For example, the average particle count attributed to ETS in their study was nearly twice as high as that determined in a study of 44 offices, [254] and nearly three to five times higher than the average levels reported in other studies of office buildings, restaurants and residences. [225, 246, 255-260]

There are a number of explanations for the authors' apparent overestimation of ETS exposure. First, they selectively sampled environments such as meeting and game rooms, bars and sandwich shops which did not represent normal occupancy conditions and where particulate levels would likely be high regardless of the presence or absence of tobacco smoke. Second, through inappropriate testing methods, they incorrectly assumed all particles in the air arose from ETS. However, as several researchers have noted, ETS typically contributes less than half to overall particle levels in indoor spaces. [261-263] Moreover, particles also are generated by people and their everyday routine activities such as movement and cooking. [264-265]

3.5.2 In addition to ignoring potential indoor sources of particles, the study has been criticized on other grounds. For example, Repace and Lowrey did not measure ventilation rates or humidity and they failed to calibrate properly their instrument prior to testing.[265] Indeed, the testing device they used "is no longer recommended" for tobacco smoke measurements. [235-236]

Repace and Lowrey implied that the particle levels attributed to ETS are potentially harmful to the health of non-smokers. However, an earlier study by Bouhuys, et al., found "no evidence that high TSP (total suspended particulates) levels in homes with smokers were associated with increased symptoms or lung function loss among non-smokers in the same home." [266] Binder, et al., found that respirable particulate levels in homes were "independent of the presence or absence of respiratory disease." [171] More recently, Lebowitz, et al., reported on data which showed that respiratory symptoms in asthmatics were associated with total particle levels indoors (e.g. dust), but not with the presence of tobacco smoke. [138, 205]

3.6.0 Nicotine

3.6.1 Since environmental nicotine is produced exclusively by burning tobacco, it is considered to be a more reliable indicator of the amount of tobacco smoke in the environment than other smoke constituents. Studies which have used nicotine in this way suggest that tobacco smoke contributes little to the indoor atmosphere. [242, 246, 257-260, 267-272]

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3.6.2 For example, Drs. William Hinds and Melvin First of the Harvard School of Public Health found very small amounts of nicotine in the atmospheres of bars, bus and airline terminals, restaurants, and cocktail and student lounges.[269] In a 1980 publication, Dr. Hinds wrote that in public places, "the typical, average airborne concentration" of the tobacco smoke to which the non-smoker is exposed is equivalent to a small fraction of a cigarette per hour.[273]

3.6.3 French researchers, using a different method of nicotine measurement to assess amount of tobacco smoke in the atmosphere, reported higher concentrations of nicotine than Hinds and First.[267] However, they still concluded that "smoking does not present a risk to non-smokers."

3.6.4 In 1984, Japanese researchers tested a personal nicotine monitor in a number of public places, including offices, restaurants, lobbies, terminals and public transportation. They reported levels of nicotine exposure equivalent to one one-thousandth (1/1000) to four one-hundredths (4/100) of a cigarette per hour.[271] Their findings were repeated in 1987.[272]

3.6.5 In 1986, scientists from the R.J. Reynolds Tobacco Company developed a portable sampler for nicotine, particulates and CO. In conjunction with ACVA International, a firm specializing in the assessment of indoor air quality, samples of nicotine, particulates and CO were taken in 23 office buildings and 48 restaurants in New York City. The scientists reported such low levels that a typical New Yorker would have to work 550 uninterrupted hours, or dine continuously for 400 hours, in order to be exposed to the nicotine equivalent of one cigarette.[257] In 1987, scientists from IT Corporation, a firm specializing in the assessment and reduction of environmental substances, repeated the New York study in offices and restaurants in Dallas, Texas and in Ottawa, Canada.[258,259] They reported average nicotine exposure levels equivalent to three one-hundredths (3/100) of a cigarette per eight-hour workday, and three one-thousandths (3/1000) of a cigarette during a one-hour meal.[258]

3.6.6 A similar survey was conducted in Hong Kong restaurants in 1987 by scientists of R.J. Reynolds Tobacco Company in conjunction with Survey Research Hongkong Limited for ascertaining the amount of environmental tobacco smoke to which non-smokers were exposed. The study took nicotine and airborne particles as indications of ETS. According to the results, the average level of nicotine was 8.4 micrograms per cubic metre and the average level of airborne particles associated with ETS was 71 micrograms per cubic metre. Expressing these

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measurements to cigarette equivalents means that the average exposure to nicotine in Hong Kong restaurant was 49/10000 of a cigarette equivalant during a one-hour meal. In other words, it would take a marathon eating session of 8-1/2 days, or more than 200 continuous hours in a restaurant to be exposed to the nicotine equivalent of one cigarette.

3.6.7 In a recent nationwide sampling survey in the United Kingdom, researchers monitored nearly 3000 sites in travel, work, home and leisure locations for ambient nicotine, CO and particle levels. [246] Smoking was known to have occurred at almost half of those sites, yet in three-fourths of the samples, nicotine levels were too low to be detected. Canadian researchers also reported levels of nicotine at or below levels of detection even in locations with recirculated air from smoking designated areas. [260]

3.6.8 There is little to suggest that the small amount of nicotine to which a non-smoker may be exposed is related to human disease. For example, two German scientists monitored several physiological responses in non-smokers exposed to tobacco smoke under laboratory conditions. [274] They concluded that the amount of nicotine to which their subjects were exposed was too small to alter sensitive test measurements of heart rate, heart muscle tracings (EKG), blood pressure or skin temperature. Similar findings were reported in 1982 by a Japanese physiologist. [275] More recent research tends to support these conclusions. In a 1983 study of nonsmoking flight attendants, researchers measured exposure to nicotine during transpacific flights. The researchers concluded that the concentrations of nicotine achieved were so small that they were "unlikely to have physiologic effects." [276] In 1986, researchers monitored levels of nicotine, CO and particulates in 66 commercial flights in the U.S. They concluded that the non-smoking sections of commercial aircraft were essentially free of ETS. [277]

3.7.0 <u>Nitrosamines</u>

3.7.1 Nitrosamines have been described as substances present everywhere in the environment, and, consequently, as detectable "wherever they have been searched for." [278] This includes the air we breathe, the food we eat and the water we drink. One scientist stated that nitrosamines occur everywhere "independent of any type of tobacco combustion, in which case concentrations are often reached in respiratory air that are far above those that may be produced by tobacco smoke." [279] Another scientist, Dr. Helmut Schievelbein, Director of the Institute of Clinical Chemistry in Munich, observed that concentrations of nitrosamines either consumed or generated daily by individuals are "many times greater"

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than those found in environmental tobacco smoke.[280]

3.7.2 The claim has been made, largely based on reports by Brunnemann, et al., that nitrosamines from tobacco smoke represent a cancer risk to non-smokers.[281-282] It is important to note, however, that Brunnemann and his co-workers have emphasized that there are at present "no epidemiological data linking human respiratory cancers to volatile nitrosamines."[283] Even the 1979 U.S. Surgeon General's Report raised questions about the relevance of their findings.[146]

3.7.3 It is sometimes claimed that nitrosamine levels in sidestream smoke exceed those found in mainstream smoke, with the implication that those levels are also found in ETS. This, however, is not the case. In 1982, Austrian scientists reported that measurements of nitrosamine levels in ordinary public places were far below the values reported earlier by Brunnemann and his co-workers. They emphasized that the levels of nitrosamines which may occur in environmental tobacco smoke "are quite different" from those found in sidestream smoke.[284]

3.7.4 A reviewer of the literature in this area noted that the "experimental basis for carcinogenic effect on human beings has not been established for the very low concentrations" of nitrosamines to which non-smokers are exposed.[242] A German scientist who discussed this point concluded that, as a consequence, any claimed implications of health risks from nitrosamines in tobacco smoke "clearly move into the range of speculation."[279]

3.8.0 Other Constituents

3.8.1 Other constituents which have been identified in analyses of sidestream smoke are often assumed to contribute substantially to indoor air in the form of ETS. The most commonly mentioned constituents include nitrogen dioxide (NO_2), formaldehyde and volatile organic compounds. However, these compounds are present in very small amounts in ETS.[285-287] Recent studies report no correlations between ETS and levels of NO_2 and volatile organic compounds in residences and offices.[288,289] Indeed, research indicates that levels of these components generated from other ordinary sources (e.g. cooking stoves, heaters and building materials) are much greater than those contributed by cigarette smoking.[285, 290]

3.9.0 Cotinine as a Marker for ETS Exposures

3.9.1 In 1984, Japanese researchers reported that cotinine, a substance converted from nicotine by the body could be used to measure non-smoker exposure to ETS.[291] While a

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number of other reports appear to endorse the claim that cotinine is a reliable marker for total exposures to ETS,[292-297] others do not.[298-304] For example, researchers have found that individuals metabolize nicotine in different ways at different times and that elimination rates for cotinine vary among individuals.[298, 299, 303, 304] In addition, recent research indicates that diet may contribute to levels of nicotine and cotinine found in the body.[305]

3.9.2 Scientists have also noted that different methods of analysis may influence final recorded levels of cotinine.[301, 303, 306] The 1984 Japanese study was criticized because the researchers used a method of analysis which was not specific to cotinine and which subsequently yielded cotinine estimates ten times higher than those reported by other researchers for the same levels of exposure.[306, 307]

3.9.3 Thus, scientific research casts serious doubt on the use of cotinine as a marker for total ETS exposure. A uniform method of analysis of cotinine must be developed and the extent of individual variability in metabolism must be determined before any pronouncements concerning the efficiency of cotinine as a marker for ETS can be made.

3.10.0 Summary

3.10.1 The foregoing literature survey demonstrates that, at most, tobacco smoke has only a minor influence upon ordinary indoor environments compared to common household or workplace sources, such as stoves, heaters and furnishings. Yet tobacco smoke, because it is so easily identifiable, has become a target for those who apparently want a quick, simple solution to the problem of indoor air pollution. However, as one Canadian scientist observed, "the claim that smoking is responsible for indoor air pollution is an oversimplification of a complex, multi-source problem."[265]

4.1.0 Environmental Tobacco Smoke and The Public

4.1.1 Exposure to environmental tobacco smoke under extreme conditions may provoke complaints or irritation and annoyance. However, the mere sight and smell of tobacco smoke may be enough to produce strong reactions in individuals who intensely dislike smoking. Although the extent to which environmental tobacco smoke may bother or annoy individuals under normal conditions has not been established scientifically,[16] it has been suggested that tobacco smoke is at most a minor annoyance for many individuals.[308-310] It has also been

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suggested that extreme reactions to tobacco smoke exposure may have a strong emotional or psychological basis.[311-312] Whatever the reasons for such reactions, the literature on this subject suggests it is misleading to claim, as anti-smokers frequently do, that such subjective or emotional reactions have a physical basis.

4.2.0 Governmental Regulations and Individual Rights

4.2.1 Although anti-smoking organizations claim to seek protection for the health and welfare of the non-smoker, their efforts to make smoking socially unacceptable are part of a broader objective -- the severe restriction or even prohibition of smoking by governmental legislation. Of course, such regulations restrict the freedom of the smoker, and anti-smokers are compelled to justify this kind of political control of individual behaviour. They have accomplished this, in large measure, by exploitation of the so-called "health" argument involving ETS exposures to non-smokers.

4.2.2 For example, the most recent U.S. Surgeon General's Report on this subject contends that ETS causes lung cancer in adult non-smokers and respiratory conditions in children, and that separation of smokers and non-smokers is not effective in minimizing the non-smoker's exposure to ETS.[14] The Report concludes that smoking bans will not only reduce ETS exposures, but will "alter smoking behaviour and public attitudes about tobacco use." The Report further suggests that "over time, this may contribute to a reduction of smoking." Thus, the underlying motivation for the use of the ETS/health argument is to attain a "smoke-free society by the year 2000."

4.2.3 The Surgeon General's tactics, however, have been questioned by a number of critics. One reviewer suggested that the Surgeon General's conclusions were based on "flimsy" evidence presented in an effort to "divert attention" from important health concerns such as the "poisoning of the environment."[313] A U.S. Congressman, in a letter to the Congressional Record, wrote that "the conclusions in the Surgeon General's Report are not supported by the research in his own report."[314] Moreover, recent scientific studies aboard commercial aircraft and in offices indicate, contrary to the Surgeon General's Report, that separation of smokers and non-smokers effectively minimizes ETS exposures for non-smokers.[260,277]

4.2.4 Five U.S. labour union presidents criticized the Surgeon General's Report for minimizing the risk imposed by workplace toxins, for shifting the burden of cleaning up the workplace to workers, and for dismissing the importance of engineering controls (e.g. ventilation) in the maintenance of a safe and comfortable workplace.[315]

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The U.S. Tobacco Institute, in a comprehensive review of the issue, observed that premature scientific conclusions about ETS, together with increasing political pressure to accept the Surgeon General's conclusions, have "brought scientific integrity to a crossroads." [316]

4.2.5 However, some governmental bodies have refused to give in to the emotional rhetoric of anti-smoking organizations and public health officials. For example, courts in the United States have, with few exceptions, denied the claims of individuals who contend they have a "right" to a smoke-free workplace. A law journal article described this trend as representing "substantial judicial reluctance to supplant the roles of employer and employee in addressing smoking in the private workplace." [317]

4.2.6 In 1987, the Supreme Court of Canada refused an appeal by a worker who sought a smoke-free environment on the grounds that ETS is a "dangerous" workplace substance. [318] Similarly, in Japan, a court judgement denied a plaintiff's request that more than half of all the railway cars on passenger trains be designated nonsmoking because, the Court ruled, ETS exposures do not "exceed the limits of normal tolerance." [319]

4.2.7 In 1984, the U.S. Civil Aeronautics Board (CAB), the federal agency responsible at that time for regulating smoking aboard aircraft, considered a petition calling for a ban on smoking on flights lasting two hours or less. The CAB assessed the health claims advanced by many anti-smoking organizations, but denied the petition, arguing that there was little scientific basis to the claims. [320]

4.2.8 In 1987, the U.S. Department of Transportation rejected a recommendation from the National Academy of Sciences [321] to prohibit smoking aboard commercial airliners because it was not supported by data associating health effects and ETS exposures aboard aircraft. [322] Nonetheless, the U.S. Congress voted to ban smoking aboard domestic flights of two hours or less until 1990 when the law expires. The Department of Transportation subsequently issued a request for proposals for in-flight monitoring of ETS and other indoor air constituents. [323] The results will be presented to Congress for its deliberations in 1990. In the meantime, other research on this issue continues. In 1988, for example, a review of the relevant data concluded that "the available scientific evidence does not support the prohibition of smoking on commercial aircraft." It also stated that the available data "suggest that factors or substances other than ETS may be major contribution to subjective complaints of discomfort by passengers and flight crew." [324]

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4.2.9 Other governmental agencies, on the other hand, have done little to clarify the issue for the public. In the United States, for instance, two separate government-sponsored reports recommended restricting tobacco smoking on the basis of risks that were characterized as "biologically plausible". [93, 321] Another report sought to identify the known facts and areas of uncertainty regarding the ETS issue and observed that "many more of the latter were found than the former." The report nevertheless concluded that exposures to ETS harm the health of non-smokers. [13] Similarly, the most recent monograph on tobacco smoke from the WHO's International Agency for Research on Cancer (IARC) warns of possible health consequences from exposures to ETS while conceding that the scientific evidence is consistent "either with an increase or with an absence of risk." [325]

4.2.10 In the United Kingdom, the Fourth Report of the Independent Scientific Committee on Smoking and Health published in 1988 endorsed the heavily criticized claim that non-smoker exposure to ETS increases the risk of lung cancer from 10 to 30 percent compared with non-smokers who are not exposed, [15] despite the fact that, as one commentator noted, "exposure data are very unreliable, and there is a proven basis for bias in the direction of exaggeration of the risk." [326]

4.2.11 In 1985, the Supreme Insurance Court of Sweden awarded compensation for occupational injury to the estate of a non-smoker who worked with smokers and who subsequently died of lung cancer.

Although the media described the Court's decision as a causal indictment of ETS exposure, one commentator noted that the decision was based upon the structure of occupational injury regulations in Sweden and not upon any scientific evidence of a causal relationship between lung cancer and ETS exposures. [327] This author explained that the Swedish insurance system operates under a reverse burden-of-proof provision, namely, that the relationship between a suspected factor and an injury is assumed to be causal unless substantially stronger reasons are produced to suggest otherwise. Consequently, this provision does not require the claimant to present scientific proof of a causal relationship between a suspected factor and an injury.

4.2.12 Three years later, in Australia, a city bus driver who contended his lung cancer was caused, at least in part, by exposure to ETS on the job was awarded a claim by the insurer of the Melbourne Transit Authority. [328] This settlement was interpreted by some as establishing legal precedent for the claim that ETS exposure has been proven to cause lung cancer. However, the bus driver's

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claim regarding ETS was only part of his complaint and the tribunal before which the proceeding was held heard only part of the evidence in the case before the insurer made a settlement offer.[329] Thus, this settlement established no formal legal precedent regarding ETS health claims.[328, 329]

5.1.0 Conclusion

5.1.1 The structure of Hong Kong society is unique to Hong Kong. Public smoking is rarely an issue unless it is raised by intolerant anti-smokers, many of whom are not Hong Kong born and bred.

Hong Kong citizens eat, work, seek entertainment and travel in Hong Kong to such an extent that community life outside the home is more a part of life than in many international societies.

It follows that Hong Kong should not succumb to international pressure group tactics which are contrary to the tolerance and freedom of choice inherent in Hong Kong society.

5.1.2 The management of cinemas, theatres and concert halls should be free to make their own decisions on smoking according to customer preferences. Many of these establishments have already provided smoking and non-smoking areas.

5.1.3 The Tobacco Institute submits that it is unreasonable for legislation to dictate the manner in which a restauranteur operates his business in relation to the number of seats he allocates to smokers or non-smokers any more than legislation should decide the number and types of drinks served or vegetarian dishes offered. The Hong Kong Hotels Association has advocated the freedom to allocate facilities according to demand and points out that demand changes from time of day, day of week or by type of clientele in a manner which legislation could not cater for.

5.1.4 Public places would not remain truly public if a large minority of the public were unduly restricted as to smoking. If there is a "problem" with smoking it can be sorted out by private choice not public rule.

Civil servants should not be subjected to discriminatory restrictions. Common sense dictates that these workers can work the issue out as easily as their counterparts in the private sector.

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5.1.5 Public transport operators should be left to make their own decisions on customer preferences. A majority of Hong Kong taxi drivers opt for no-smoking but even those drivers will sometimes permit smoking on a long journey. They have made their own decision in the matter and legislation is unwarranted and unnecessary.

5.1.6 Public transport operators should not be required by law to change to 100% no-smoking. The traditional demarcated areas work satisfactorily and cater for customer demand. It is fundamentally wrong to treat smokers differently to non-smokers, particularly on long haul or ferry journeys.

5.1.7 An objective review of all the literature leads to the conclusion that legislation is unwarranted, unnecessary and an infringement on fundamental rights of Hong Kong citizens.

Common sense, accommodation patience, scientific research, good manners, corporate and workplace responsibility - these can all deal with the social issues posed by ETS.

5.1.8 Smoking behaviour can be approached as a matter of private choice, not public choice.

Entities in the private and public sectors can adopt the smoking policies that their workers and patrons prefer. This does not mean laissez-faire for smokers. Some organizations will ban smoking, and some will not. Some will manage their ventilation systems properly. Still others will segregate smokers and non-smokers, and so on. The pattern that emerges will be the result of private alternatives and choices.

5.1.9 The public choice alternative involves having bureaucracy choose a single rule for all.

The private choice alternative is consistent with the practices of a free society. The public choice alternative is the route to dominance of personal preferences by one group over another. If that can be implemented over smokers - who is next?

5.1.10 The COSH recommendations in fact make smoking a scapegoat for Hong Kong's <u>real</u> environmental problems - air and water pollution.

5.1.11 For example, recent readings of carbon monoxide in the outside air of Hong Kong have reached levels six times higher than the World Health Organisation recommended levels for indoor air.

When this air enters buildings it creates a problem that smoking bans will not solve.

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5.1.12 It is extremely misleading to create the impression that a smoke-free environment guarantees a healthy environment.

5.1.13 An Australian writer recently summarized the issue of governmental influence on the ETS question.[330] He wrote :

> Those involved in government anti-smoking activities should be aware of the tenuous nature of the data on passive smoking and health effects. The deliberate use of fear inducing tactics by misrepresenting such data by dubious extrapolations is propaganda and not health education.

5.1.14 It is clear that once the health claims regarding environmental tobacco smoke are placed in their proper scientific perspective, the issue of prohibiting smoking in public places becomes a social and political one. As a former director of the WHO wrote recently, "the question as to whether the conceivable theoretical possibility of a risk calls for official preventive measures is not a medical but a politico-social one."[19]

5.1.15 The issue thus involves whether or not public policy should mandate prohibition of smoking because it is seen by some as a nuisance or annoyance. If the decision is reached in favor of regulation, then one must decide whether the same line of reasoning applies to other kinds of "annoyances" encountered in everyday life and whether those "annoyances" should also be banned. The implication of such reasoning should be obvious to anyone who is opposed to unwarranted governmental intrusion into people's lives.

5.1.16 A recent article on the principles of public policy relating to smoking suggests an alternative to governmental regulations. According to this article, "the appropriate form of public policy is the promotion of courtesy and cooperation between smokers and non-smokers, rather than outright prohibition."[331] This solution relies upon common sense, courtesy and the free marketplace for decisions concerning smoking. More importantly, however, this solution avoids unnecessary governmental interference with its subsequent loss of individual freedom.

6.1.0 <u>Specific Comments on COSH Recommendations 2 and 7</u>

6.1.1 It is agreed that smoking should be prohibited in video-game centres catering to those aged below 16.

6.1.2 If the government believes COSH recommendation 7 can truly facilitate enforcement, the Institute would have no objections.

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environmental tobacco smoke contains numerous examples of studies conducted under unrealistic conditions. For instance, in one such experiment, 80 cigarettes and 2 cigars were burned during a 78-minute period in a small unventilated simulated conference room.[237] In another case, 9 cigarettes were smoked one after another in an unventilated automobile.[238] Not surprisingly, the levels of CO measured in these unusual situations were extraordinarily high. Regrettably, studies of that sort are often cited as conclusive evidence of the impact of ETS on ordinary room air.

3.4.2 On the other hand, when carbon monoxide from ETS has been measured under realistic conditions, its contributions have been determined to be minimal.[239-246] Most recently, scientists in the United Kingdom monitored CO and other constituents in over 3,000 locations throughout the country.[246] They reported that carbon monoxide levels did not differ significantly between smoking and nonsmoking environments. Putting such studies into perspective, Dr. Duncan Hutcheon, a professor of medicine who has reviewed the literature, noted : "Environmental studies suggest that tobacco smoke has little impact on the CO content of the room air except under highly artificial conditions."[247]

3.4.3 What then are the sources of CO in public places? Research has shown that the main sources in the outdoor urban environment are motor vehicles and industrial processes,[248] and that indoor levels are affected by these outdoor sources, mainly through ventilation, and by numerous activities such as cooking and heating. In fact, studies have indicated that gas stoves in kitchens and heating units are often major sources of CO in homes.[249-251]

3.4.4 After their review of such studies, participants at the Geneva symposium on ETS concluded that CO from environmental tobacco smoke "is not important from a health point of view."[16] Similarly, researchers from the Lawrence Berkeley Laboratory in the U.S., who are otherwise critical of tobacco smoke, concluded that "based on theoretical and empirical results, CO sidestream emissions from cigarettes have often been overemphasized."[252]

3.5.0 <u>Particulates</u>

3.5.1 A paper published in a 1980 issue of Science magazine, in which the authors reported the results of their efforts to measure particles or particulates in the air of smoking and nonsmoking areas, is often cited to support the claim that ETS is a major indoor pollutant.[253] The authors, Repace and Lowrey, contend that the levels of particles they observed in the smoking areas were much higher than in the nonsmoking

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7.0.0 Recommendations for stronger, larger, rotating warning notices, a change in "Tar" bandings and the imposition of tar and nicotine ceilings.

7.1.0 Introduction

COSH recommendations 8, 9, 10, 11 and 12 call for changes which are not justified by the state of science; represent a restriction on consumer choice; will reduce the value of trademark assets; will run the risk of consumer confusion and will represent a severe form of unnecessary manufacturer harassment.

7.2.0 Government Health Warnings

7.2.1 Current Hong Kong Law provides for the government warning : -

"Smoking is hazardous to your health"

7.2.2 COSH has previously recommended health warnings stating a "causal" relationship between smoking and certain diseases. Such warnings are unjustified in that they do not reflect the current state of scientific or medical knowledge.

7.2.3 Since the current law was drafted, there have been no significant changes in the relative scientific or medical knowledge.

A further change in health warnings is therefore unwarranted.

7.3.0 Justification for Warnings?

7.3.1 Despite worldwide medical and experimental research programmes conducted for over 30 years, the actual causes of many diseases often attributed to smoking are still unknown.

7.3.2 In terms of statistical relationships, the basic epidemiological studies, undertaken by Doll and Hill[1] Hammond and Horn [2] Dorn et al. [3] Kahn et al.[4] and other studies upon which the causal hypotheses have been advanced, have been criticised by eminent statisticians such as Sir Ronald Fisher [5] Professor Theodor Sterling [6] Professor Joseph Berkson [7] Professor Emeritus Eleanor MacDonald [8] and Professor Philip Burch [9] to name a few.

Their criticisms, as published in the scientific literature, are that :

- The populations concerned were not randomly selected;

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- the populations studied were not representative of their national population, let alone those of other countries;

- the participants were 'self-selected' as either smokers, ex-smokers or non-smokers and it has been shown that there are different personality traits between these types which can bias a statistical analysis as can 'self-selection';

- and, in some studies, the interviewers were not trained, experienced, or even impartial.

7.3.3 More recent epidemiological studies have shown that any correlation between smoking and the causation of lung cancer, heart disease and emphysema diminishes or becomes insignificant when other factors, including lifestyle, workplace and residential pollution, hereditary and genetic factors, are taken into account.[10]

7.3.4 Apart from epidemiological findings it is accepted by scientists that one of the critical steps towards determining whether or not a statistical correlation shows a cause and effect is by experiments with animals. Over the last 20 years there has not been one experiment with animals that was scientifically acceptable, or that produced the same results when repeated, that has shown smoking to cause either lung cancer, heart disease or emphysema. Experiments, using the same animal models, have produced lung cancer or heart disease or emphysema with other chemicals or products but have not produced these diseases in animals exposed to whole cigarette smoke. In some experiments the smoking animals contracted less disease and live longer than the non-smoking animals.[11]

It is a basic rule of science that a statistical correlation, no matter how strong or consistent, does not constitute proof of causal relationship in an association.

Therefore, any warning notice stating a causal relationship between cigarette smoking and disease cannot be justified.

7.3.5 In the face of the controversy which continues to exist over epidemiological studies, the present health warning, is as far as a Government warning should go.

7.3.6 Any "causal" warning would, by Government edict and not by due process of science, imply that the cause of cancer and heart disease had been found.

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7.4.0 The Positioning and Size of Warnings

7.4.1 It has been proposed that pack warnings should double in size and appear on front and back of the pack. Such warnings would occupy a substantial area of each major pack face and go beyond the accepted approach in other countries.

The commercial damages likely to be inflicted by any decision to expropriate such large areas of pack surfaces appears to have been understood by other Governments. Countries such as U.S.A, U.K and Japan, for example, require the warning to be carried on a side panel. Norway and Sweden - held by anti-smokers as models - give manufacturers the option of placing the warning on the front or back or side panel.

7.4.2 Any further degradation of pack designs will either breach international trade mark agreements or significantly reduce the real value of trade mark assets which are the property of the companies' shareholders.

Any intrusion by Government on registered trade marks and pack designs would result in a devaluation of commercial assets in the private sector. No Government should want to contemplate such commercial interference.

7.5.0 Overseas Brands

7.5.1 Current Hong Kong Law requires that all imported cigarettes bear the current warning notice.

Current Government policy is to free up imports. Packs carrying the warnings in the manner recommended by COSH, would be unlikely to be exported here by overseas manufacturers who would either refuse to adopt such degradation of their product or would not be permitted to breach trade mark or pack design agreements.

7.6.0 Rotating Warnings

7.6.1 Proposals for rotating warnings in Hong Kong disregard manufacturing economics for a market of this size.

7.6.2 The sales volume for individual brands is such that it is only economic to produce several months' packaging in one printing run. If Hong Kong suppliers were required to have a variety of warnings on the market simultaneously, they would be required to carry much larger stocks of packaging than is justified.

7.6.3 The Hong Kong public is well aware of the government warning. In fact, 98% of the public is aware of the government warning that "Cigarette Smoking is Hazardous to Your Health" and no evidence has ever been provided to suggest that rotating warnings would create a different situation.

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7.6.4 In a few markets, rotating warnings have been required. There are no reports from these countries to suggest either increased public awareness or higher rates of smoking cessation. COSH should be required to demonstrate any result of rotating warnings in those markets if its proposal is to be seen as other than manufacturer/importer harassment.

7.6.5 Rotating warnings of the type suggested are unwarranted, either for reasons of the state of scientific or medical knowledge or of the economic realities of the Hong Kong market.

7.6.6 Guidelines for Government warning labels :

1) should be balanced, not exaggerate or mis-state the facts and reflect the fact that the claimed role of smoking in disease causation has not been scientifically proven;

2) should not be open to conflicting or ambiguous interpretation;

3) should be attributed to the appropriate government authority; and

4) should not detract from the package design, a valuable commercial asset, established over many years at considerable expense.

7.7.0 Statement of "Tar" Ratings

7.7.1 COSH has recommended a departure from the present system of stating the "tar" content of particular brands. In effect, as cigarettes have moved into lower and lower categories of "tar" over a period of time, COSH wants to alter the categories so as to camouflage the changes that have been made. Such a move would serve only to confuse the public.

7.8.0 "Tar" Ratings of Hong Kong Cigarettes

7.8.1 The situation in the Hong Kong market is such that the majority of cigarettes sold yield less than 18 mg of "tar" on testing - the ceiling recommended by COSH.

The sales weighted average "tar" yields of cigarettes sold in Hong Kong in early 1989 was 15.90 mgs per cigarette (Price Waterhouse, an independent accounting firm). For comparison purposes, the general definition of a "light" cigarette in the United States is a cigarette with a "tar" yield of 15 mg or less.

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7.8.2 A reduction in average "tar" yields from well over 20 mgs per cigarette in the 1960's has been achieved without coercion and in response to consumer demand for milder cigarettes. At present cigarettes are available on the Hong Kong market with yields from below 2 mgs to a non-filter brands with over 20 mgs.

7.8.3 The state of science does not support the recommendation for statements of degrees of "hazardousness".

The industry makes no claim that low "tar" yield ciagrettes are "less hazardous". Indeed, there is significant debate amongst those opposed to smoking whether low yield cigarettes should be recommended or not. However, should the Government believe that lower "tar" yield cigarettes are preferable it should take cognizance of the wide range of yields already available on the market.

7.8.4 The industry would question any imposition of maximum "tar" yields for manufactured cigarettes. These yields are established by a standardized smoking regime which is incapable of taking into account the wide variations in smoking behaviour. There will always be a proportion of smokers who, for whatever reason, prefer stronger cigarettes, and if this choice is denied them by the imposition of maximum yields on manufactured cigarettes, they could simply turn to roll-your-own products where "tar" yields are unmeasurable and unenforceable. Or they could smoke a greater number of manufactured cigarettes.

7.8.5 The industry has lowered "tar" ratings in response to consumer demand and the sales weighted tar yields per cigarette will be below 15 mgs for the current year even though research has found that : -

> "No ingredient or combination of ingredients, as found in tobacco smoke, has been shown to cause human lung cancer." [12]

And the U.S. Surgeon General's 1983 report admits :

> "The exact mechanism whereby nicotine could trigger a cardiovascular event is unknown." [13]

7.9.0 <u>Conclusion</u>

7.9.1 In the face of this documentation, we submit that Government, if it is to retain credibility for its cautionary notice, should be wary of adopting what have been described as "more specific" health warnings.

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7.9.2 Evidence to date suggests that the current warning is more than sufficient. If Government is pressed further, it should pose the following questions : -

1. Is it a fact that the causal hypothesis is based upon epidemiological or statistical studies?

2. Is it a fundamental rule of science that a statisticial association cannot prove causality?

3. Is it true that factors, other than cigarette smoke, have been shown by epidemiological studies to have a correlation with these diseases?

4. Is it true that when these other factors, including dietary, residential and workplace pollution, and genetic factors are measured the statistical correlations between smoking and these diseases diminish or become insignificant?

5. Why is it that hypotheses contrary to the causal hypothesis, based upon equally valid epidemiological studies, are ignored by COSH and smoking is singled out as the cause of such diseases?

The answers to these questions confirm that the actual causes of cancer, heart disease and pulmonary disease remain unknown, let alone what part cigarette smoking may or may not play in the onset of these diseases or their mechanisms.

7.9.3 If Government believes that lower "tar" yield cigarettes are preferable, then it should be satisfied with both the low average yield of cigarettes sold in Hong Kong and the wide range of yields which includes cigarettes below 2 mgs.

7.9.4 It should be noted that "tar" is a laboratory product produced by passing tobacco smoke through a cold trap at an extremely low temperature - a procedure that does not apply to human smokers.

7.9.5 Had COSH consulted the tobacco industry while making a recommendation, it would have realized that it is virtually impossible to make a cigarette which delivers "15 mgs" of tar and "1 mg" of nicotine.

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8.0.0 Recommendations to progressively legislate for a total ban on all forms of tobacco advertising, promotion and sponsorship.

8.1.0 Introduction

8.1.1 COSH recommendations 14, 15, 16, 17, 18, 19, 20, 21 and 22 represent a drip-feed progression toward an eventual ban on any form of tobacco manufacturers' communication in Hong Kong.

8.1.2 Such a proposal is contrary to the principles of freedom of speech, open competition, free market forces, informed consumers, freedom to choose sponsorships and is known by COSH to be an ineffectual means of reducing smoking.

It can therefore only be interpreted as a discriminatory punitive measure against a legitimate industry and its consumers.

8.2.0 Tobacco Advertising, and Sponsorship in Hong Kong

8.2.1 The COSH proposals on advertising, promotion and sponsorship ignore the following facts.

8.2.2 Cigarette advertising has not increased the total tobacco market; it has been limited to competing for a share of a declining market.

8.2.3 Cigarette advertising has not been shown to influence young Hong Kong people to smoke.

8.2.4 Cigarette advertising has not been shown to influence adults to take up smoking or continue to smoke.

8.2.5 Bans on cigarette advertising would deprive consumers of important product information, such as release of new low-tar brands, and elsewhere bans have not reduced consumption.

8.2.6 Cigarette advertising in Hong Kong already adheres to controlling legislation and to the industry "Code for the Marketing of Cigarettes" and "Code for Cigarette Brand Sponsorships".

8.2.7 Independent 1988 Research [1] has shown that the majority of Hong Kong residents agree that other forms of currently permitted cigarette advertising should be allowed to continue.

8.2.8 The same research has shown that a majority of Hong Kong residents believe that sponsorship by cigarette companies should be allowed to continue.

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

8.2.9 Tobacco sponsorship have not been shown to increase the consumption of tobacco.

8.2.10 Tobacco is a legal product and repressive impediments to its normal commercial marketing have disturbing implications. Independent 1988 Research [1] has shown that the majority of Hong Kong residents agree that if it is legal to sell cigarettes to adults, then it should be legal to advertise to them.

8.3.0 Effect of Advertising on Total Market

8.3.1 The total abolition of smoking is the ultimate aim of many anti-smokers (as opposed to non-smokers) no matter how hard they try to avoid being termed "prohibitionists". They propound that a ban on cigarette advertising will bring about a marked reduction in cigarette smoking. Yet the evidence from around the world is overwhelming that advertising bans do not reduce consumption, and that cigarette advertising does not increase the total number of cigarettes sold.

8.3.2 The purpose of cigarette advertising is to encourage existing smokers to change from competing brands and to maintain the brand loyalty of existing smokers of the advertiser's brand. While cigarette advertising is therefore both assertive and protective, its role is not to increase or maintain the total "pool" of smokers.

The layman's view is that advertising is designed to increase total sales volume. The marketing man knows that there is a difference, however, between a "mature" market and a newer, unsaturated market for a consumer product. As an example, an advertiser's success in the food market depends not on persuading people to eat more food in total, but on achieving a switch in product preferences or eating habits. By contrast, advertising for products such as toys, cinema films, home computers, microwave ovens, barbecues, etc, (unsaturated markets) will frequently contribute to overall growth in the total market.

8.3.3 It would be easy to assume that advertising is unnecessary, but the competitive need for companies to compete for shares in this existing market is fundamental to the market system. By contrast, a ban on cigarette advertising would be anti-competitive and thereby contrary to Government policy and to the ultimate interests of consumers.

8.3.4 The market for cigarettes in Hong Kong is mature, with no relationship between levels of advertising and levels of cigarette sales. Nothing illustrates the point more clearly than the Maxwell Report annual sales for 10 years in Hong Kong/Macau.

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

Demonstrably, cigarette advertising has not influenced overall sales levels:

Years to December	Cigarette consumption (Maxwell) (includes Macau)
1978	7089 million units
1979	8315 million units
1980	9299 million units
1981	9514 million units
1982	8260 million units
1983	7644 million units
1984	7068 million units
1985	6469 million units
1986	6637 million units
1987	6969 million units

If increases in total cigarette sales were indeed sought from or caused by the weight and nature of cigarette advertising, then the conclusion would be inescapable that cigarette advertising in Hong Kong over ten years has been lamentably ineffectual.

8.3.5 Worldwide studies have shown advertising not to increase the total cigarette market. Perhaps the most extensive study was that carried out by the French-based Metra Group which examined the behaviour of the United Kingdom cigarette market over 20 years to 1978. Metra concluded in its report:-

> "in a comprehensive statistical analysis of the United Kingdom situation covering the last twenty years, no evidence has been found of a significant association between the total level of media advertising and total cigarette sales."

8.3.6 In 1982 an advisory committee to the EEC Commission found that advertising in the tobacco sector served above all to promote brands, and did not have an influence on total usage.

8.3.7 In a preliminary report on research being carried out into the influence of advertising in five major areas of consumer expenditure, including cigarettes, Professor Peter W. Kyle of the Department of Marketing, University of Lancaster, reported in the October/December 1982 issue of the Journal of Advertising, that:-

> "no market showed advertising to have any effect upon its size."

8.3.8 The author of a 1985 study of advertising and expenditure and aggregate demand for cigarettes in Australia had this to say:-

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

"We find no statistical evidence that aggregate advertising has any effect on aggregate cigarette demand, a result which is consistent with the view that advertising in the cigarette industry is used as a brand switching device."

"Nevertheless, anti-smoking activists continue to press for a total ban on cigarette advertising in Australia. The question must be asked why this is so in light of the negative statistical evidence that there is no total advertising effect, especially when they choose to use statistical evidence to "prove" that cigarette smoking causes health problems. This must seem to the objective observer as an obvious use of a double-standard.(2)

8.3.9 Cigarette advertising, to have any commercial justification in logic, must have other objectives and commercial effects - and it does. Such advertising serves both informational and competitive purposes, i.e. informing consumers of availability, properties and prices of advertised brands and enabling brands (and their suppliers) to compete for shares of an existing market. This competitive opportunity is fundamental to the Hong Kong free market system and is an indispensable ingredient of both product innovation and true consumer choice. As a necessary corollary, a ban on cigarette advertising would be anti-competitive.

8.4.0 <u>Effect of Advertising Bans on Total Sales</u>

8.4.1 Just as cigarette brand advertising does not increase the total tobacco market, so advertising bans or restrictions do not cause a decline in total cigarette sales.

8.4.2 German psychologist and researcher Reinhold Bergler brought together in 1980 worldwide literature, statistics and research studies for his book "Advertising and Cigarette Smoking" and concluded:-

"In the final analysis, the bans on advertising proved ineffective, and the theory that there exists a positive correlation between the volume of advertising and the volume of cigarette consumption must accordingly be dismissed as false."

"All the available data point to one conclusion, and one conclusion only. Imposing a ban on cigarette advertising - irrespective of the media forms to which it applies and irrespective of the time when it came into force - is not an effective way of slowing down the rise in cigarette consumption, still less a means of producing a decline in consumption."

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

8.4.3 A 1982 survey of the effects of partial or total advertising bans was conducted by a Federation of Advertising Industry Trade Associations in Germany, ZAW. It examined sales statistics for comparable periods before and after complete or partial advertising bans. The conclusion of the ZAW study was that : -

> "every country in the world that has tried to reduce smoking by restricting tobacco advertising has been unsuccessful."

8.4.4 In April 1986 the International Advertising Association published a report on investigations as to whether advertising bans in 16 countries had been followed by decreases in overall tobacco consumption. [3] The report was the result of a detailed study of data and information from the following eight "centrally planned" economies : -

Bulgaria	Czechoslovakia
German Democratic Republic	Hungary
Poland	Rumania
U.S.S.R.	Yugoslavia

Additionally, the report studied data and information from the following eight free market economies : -

Finland	Iceland
Italy	Norway
Singapore	Sweden
Taiwan	Thailand

8.4.5 This report is particularly significant in that it includes studies of Norway and Finland where total tobacco advertising bans have been in operation since 1975 and 1978 respectively and upon which much attention has been concentrated by the anti-smoking organisations in the debate upon advertising.

8.4.6 In his conclusion to this report, Professor J.J. Boddewyn, Professor of Marketing/International Business Baruch College, City University of New York, stated : -

> "Whether tobacco advertising affects tobacco consumption is a complex problem, and the burden of proof is on those who claim that this relationship is strong in order to justify their demands for advertising bans. Available research to date points the other way.
>
> The following report serves a more modest if worthwhile purpose, namely, to investigate whether advertising bans have been followed by decreases in overall tobacco consumption. The answer is NO."

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

8.4.7 Norway and Finland are frequently cited by anti-smoking antagonists as being shining examples of the success of cigarette advertising bans. It should be emphasised, therefore, that Boddewyn's conclusions embrace these two countries.

8.4.8 A more recent official report to the Finnish National Board of Health reports that there has been a clear increase in smoking among adolescents during the period 1985-1987 and that Finland has failed to prevent smoking and raise a non-smoking generation. [4]

8.5.0 Advertising's Influence on Individuals to Smoke

8.5.1 Cigarette advertising does not influence people (including young people), to take up smoking or continue to smoke. Worldwide studies have discredited the fashionable assumption that cigarette advertising is a positive inducement on young people to commence smoking. The Advisory Committee on Tobacco to the EEC Commission has concluded : -

> "Advertising cannot be made responsible for young people smoking."

8.5.2 The 8 July 1978 British Medical Journal editorialised: -

> "People who have never smoked attribute more influence to advertising and to the media than do smokers themselves...; after all, the Russians and even the health conscious Cubans smoke like chimneys, without any commercial encouragement."

8.5.3 A June 1975 report of the United States Department of Health, Education and Welfare reached remarkably frank conclusions on the lack of an inter-relationship between advertising and decision of people to smoke : -

> "There is no evidence to support the view that a ban on advertising would have a positive effect on smoking habits. No empirical research has been able to show that aggregate brand advertising leads to greater total tobacco consumption. Nor has anything been found to suggest that advertising entices non-smokers, young people in particular, into becoming smokers. It follows, therefore, that there can be no evidence showing that a ban on advertising would result in reduced tobacco consumption and fewer new smokers."

8.5.4 A report on expert hearings in the German Federal Parliament in April 1985 refers to the motivation of cigarette advertising in a manner which shows that the findings of these earlier studies continue to be valid. The report noted : -

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

"The motivation of young people to smoke came neither from advertising nor from the purchasing outlets." (vending machines)

8.5.5 A 1989 16-country comparison prepared by the Children's Research Unit (CRU) [5] provides strong evidence that advertising plays a minuscule role in the initiation of smoking by the young. Instead, parents, siblings and friends appear to be the determining factors when children start to smoke.

8.5.6 Recent studies (1984-1989) conducted by CRU provide not only corroborative evidence but also a new angle by focussing on sixteen countries where the control of cigarette advertising ranges from a ban (Norway) to rather limited restrictions (Argentina, Hong Kong, Japan, Kenya, Philippines and Spain), with New Zealand, Australia, Canada, Sweden, Switzerland, Turkey, Kuwait, Italy and the United Kingdom standing in between.

It establishes that family and peer influences appear to be the determining factors, irrespective of whether the young are exposed to cigarette advertising or not, with all sixteen countries reporting the similar overwhelming impact of social and cultural influences on young people smoking initiation.

8.5.7 This study also breaks new methodological ground in that, for the first time, an established Smoking Prevalence Estimator has been applied internationally to produce a comparable measure among countries with differing tobacco advertising controls.

Besides, instead of using diaries or impersonal questionnaires administered at school, as is common in this field, the present survey with the exception of Canada (interviews in shopping malls) used personal interviews conducted at home. Again, this is a first international methodological breakthrough which has generated a comparable international data base about young people smoking initiation and incidence.

Great care was also exercised in adapting some of the questions to the particular locals, since customs vary from country to country. Finally, a far broader age range (7 to 15/16 years old) of respondents were interviewed than in most other studies, in order to provide a more comprehensive understanding of the factors involved.

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

8.5.8 The findings challenge the validity of fairly common assertions that the young start to smoke because they have been exposed to cigarette advertising. They also raise questions about the effectiveness of tobacco advertising bans. In Norway, the subjects of the study were too young to have been influenced by cigarette advertising before a ban was imposed in 1975; indeed, some of the subjects of the study had not even been born then. By contrast, all of the subjects of the study in Spain and Hong Kong had grown up in the presence of cigarette advertising, yet the incidence of smoking among the juveniles studied in Spain and Hong Kong was lower by far than the incidence of smoking among juveniles in Norway. Clearly, factors other than advertising are at play, and they predominate. The research clearly establishes that advertising should not be made into a scapegoat for young people smoking.

8.6.0 The Information Role of Advertising

8.6.1 Any ban on cigarette advertising would deprive consumers of legitimate and worthwhile product information.

8.6.2 There are many products which are believed, frequently on the basis of unproven epidemiological hypotheses, to be potentially injurious to health; e.g. dairy products, meat, sugar and sweets, automobiles, alcohol, salt, "fast foods", pharmaceuticals, soft drinks, caffeine and many others. If all the citizens who use those products were to be denied relevant advertising they would be seriously inhibited from making informed purchasing decisions, particularly as between competing products or brands. The same would apply to purchasers of cigarettes in a climate of a total advertising prohibition.

One example will serve to illustrate the important informational aspect of cigarette advertising. In a recent United Kingdom publication "Advertising and Cigarette Consumption" by M.J.Watterson, Research Director of the United Kingdom Advertising Association, a slower switch to filter cigarettes is shown to have occurred in countries with long term advertising bans (on average around 65 percent conversion), while countries where advertising is not unduly restricted have had a much faster switching rate (on average over 90 percent conversion.)

8.6.3 Unless a logical and conclusive case can be made for a prohibition of any form of legitimate advertising, it would be inappropriate to impose an impediment to normal commercial communication between the producer of a legal product and its ultimate user.

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

8.7.0 Advertising as a Feature of Democratic Freedoms

8.7.1 As long as Hong Kong holds firm to traditional ideals of freedom, and as long as the importing, manufacture and sale of tobacco remain legal, then the intelligent and responsible communication of product information using acceptable advertising should remain equally legal.

8.7.2 Unduly repressive impediments to the normal commercial marketing of cigarettes have disturbing implications which range well beyond issues of tobacco. Around 750,000 Hong Kong residents choose to smoke. At any time those hundreds of thousands of consumers can make decisions as to which brands they will buy, where they will buy, in what quantities and at what retail prices.

The ability of competitive tobacco product producers to communicate with those consumers is a fundamental commercial right. It is also, we contend, an important feature of the general constitutional environment which Hong Kong residents feel entitled to expect.

8.7.3 The Editor of the United States mass circulation magazine "Family Circle" addressed the issue of commercial freedom in the following terms:-

> "It is our feeling, therefore, that prohibiting cigarette advertising would be a violation of the rights of a legal segment of American business, and, more important, a violation of our readers' rights to choose."
>
> "Should we prohibit automobile advertising from our pages because hundreds of thousands of people are maimed or killed each year from car accidents?"
>
> "Do you feel we should prohibit liquor advertising because alcoholism has reached epidemic proportions in this country?"
>
> "The reasonable answer is, I think, that our readers are highly intelligent people who are able to make up their own minds on these questions."

8.7.4 Mr. Renny Cunnak, Chairman of Ogilvy & Mather, Australia, Board Member of Ogilvy & Mather International and formerly Chairman of Ogilvy & Mather, New Zealand in a speech on 9 May 1980 to the South Australian Post Graduate Medical Association Annual Forum, observed:-

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

"Nothing can be more illogical - or hypocritical - than for a government to permit the manufacture and sale of an article, and at the same time prevent its legitimate advertising. And nothing can be more patronising than to suggest that consumers are incapable of resisting the power of advertising. On the contrary, they are able to resist it with the greatest of ease, as every businessman knows, to his cost."

8.8.0 The Existing Restraints on Advertising and Sponsorship

8.8.1 The Hong Kong tobacco industry "Code for the Marketing of Cigarettes" and "Code for Cigarette Brand Sponsorships" regulates cigarette advertising and sponsorship in Hong Kong.

8.8.2 The former regulates advertising content, available media, sales promotions and sampling. The latter lays down specific requirements for sponsorship activities including a provision that promotional material for sponsorships is limited to company or brand names and insignia. Cigarettes themselves, cigarette packets, persons smoking, or advertising claims for particular brands are not permitted.

8.8.3 A study of the codes in their entirety will demonstrate the restraint of cigarette manufacturers over a wide range of activities and, in particular, the proper steering of promotion away from children.

8.8.4 The elimination of tobacco use is ultimately sought by many of those who support the concept of an advertising ban. Without questioning their right to hold their views on the matter or to seek to persuade others of the validity of their views, the Institute does question why few of those so implacably opposed to tobacco in any form are prepared to argue a case for making the importing, manufacture, sale or use of tobacco illegal. That would be the proper course to take if their convictions are as soundly based as they would contend.

They know, of course, that almost nobody would support such a curtailment of traditional freedoms and therefore limit their prohibitionist objectives to less obvious (and less popular) commercial freedoms.

8.8.5 Restrictions on tobacco advertising have occured overseas in recent years. Outright bans on cigarette advertising have been imposed in some countries, and several have laid down stringent restrictions. It is most important that those who understand the essential economic and social role played by advertising should realise the seriousness of the threats posed by the progressive erosion of this vital means of communication.

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

Many observers inside and outside the advertising and tobacco industries believe that these restrictions have long gone beyond reasonable and necessary limits, and have set precedents which could in time affect not only the tobacco industry, but many others as well. There is certainly a strong case for saying that in many instances they amount to outright censorship - a dangerous precedent indeed, in this as in any field of communication.

8.8.6 Consumers everywhere require product information to help them judge between one offer and another. It is their guarantee of genuine freedom of choice.

Accordingly, the Hong Kong tobacco industry "Code for the Marketing of Cigarette" should be supported as a preferable alternative to an advertising ban.

8.8.7 When manufacturers of perfectly legal products are banned from advertising in certain media - or even from advertising at all - a completely different situation arises. It is the start of a process of restriction on the free flow of competitive commercial information; a form of censorship which strikes at the very basis of a free economic society.

A ban is not the same thing as a code of control. Such codes modify and limit the workings of mass marketing. Bans cut the lines of communication upon which the market - and the consumer it serves - depend. To ban advertising completely would suggest, ultimately, that the consumer has no right to enjoy or to use legal products, since by banning advertising one is seeking to impair or even destroy the marketing mechanism which makes those products available.

Marijuana and other drugs are not, and never have been, advertised in Hong Kong. Yet there is an increasing trend in the use of these products.

8.8.8 The opponents of tobacco advertising claim that tobacco advertising increases consumption of cigarettes and encourage young people to start using them. At the very least, they say, advertising helps to create a 'climate of acceptability' and on that ground alone it should be banned.

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

The two claims that advertising increases consumption and encourages young people to start smoking are unfounded. A large body of professional research has shown that there is no demonstrable connection between advertising and total cigarette consumption nor does the evidence establish that advertising leads young people to start smoking. Cigarette advertising has not been shown to influence smoking initiation in young people particularly in Hong Kong, [5] which has one of the lowest incidence of young people smoking in the world. Young people's experimentation with smoking is built up from a combination of factors (not related to advertising) over a considerable period of time.

8.8.9 As to the 'climate of acceptability' objection, raised by opponents, smoking is seen as acceptable by some for two primary reasons :

1. It is part of the established social fabric and people have been doing it for centuries, since long before advertising began and in countries where advertising has never been permitted.

2. Smoking products are widely and legally offered for sale. Limiting or banning advertising would not change either of those facts. And only anti-smoking zealots would suggest that smokers should be punished, or that smoking should be made illegal.

Smoking is acceptable because smoking has been accepted by many individuals as a satisfying activity. Tobacco advertising is a result, not a cause, of that acceptance.

8.8.10 The end result of advertising restrictions - on tobacco or any other legal product - can only be to limit choice; to block the free flow of information; to emasculate competition, cancelling its benefits; to penalise the advertising media; to inhibit commercial investment and employment; to jeopardise present investment; and to place powers of censorship in the hands of pressure groups who, lacking any electoral mandate, have no right to wield them.

Hong Kong residents' opinions are clear from the 1988 independent research findings mentioned earlier. [1] An overwhelming majority of respondents agreed that cigarette advertising should continue in Hong Kong.

8.9.0 <u>Sponsorship</u>

8.9.1 Commercial sponsorship is a vital ingredient of Hong Kong's sporting, cultural and community life.

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

8.9.2 The list of respectable corporate names and/or brands involved in sponsorship is quite extensive : -

ESSO
Mobil
Marlboro
Hong Kong Bank
I.B.M.
Cartier
Caltex
Dunhill
American Express
Heng Seng Bank
South China Morning Post
Salem
Benson and Hedges
etc.

All these sponsorships involve products or services which are legal to sell and legal to advertise.

8.9.3 The COSH recommendations suggest that cigarette companies should be prevented from participation in this legitimate community role of sponsorship.

The recommendations also suggest that the recipients of cigarette company sponsorship should have their freedom of choice removed.

COSH is on record as going even further when in November 1987 its Executive Director urged the Governor not to attend a Hong Kong ballet performance which was sponsored by a company which also marketed cigarettes.

8.9.4 The Tobacco Institute contends that any proposal to ban cigarette company community support, to remove the right to choose from sponsorship recipients and the right to attend cigarette sponsored events from Hong Kong residents should be rejected.

Such a proposal strikes at the heart of community freedoms and would remove valuable, much needed support for sporting and cultural activities which benefit society so much.

8.9.5 Clearly, there are little support for the proposal amongst Hong Kong citizens themselves.

Independent research [1] shows that a significant majority of Hong Kong residents agree that the sponsoring of sporting, cultural or other activities by tobacco company should be allowed to continue.

8.9.6 Cigarette sponsorship is regulated within the industry "Code for Cigarette Brand Sponsorships" to ensure a cigarette pack or product slogan is not depicted.

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

Yet anti-smoking activists have claimed that sponsorship activities will encourage people, particularly young people, to take up smoking.

8.9.7 Such claims are based on the erroneous conclusion that brand recall represents persuasion and results in purchase.

The fact is that young people characteristically recall an impressive number of brand names of many different products. A significant proportion pertain to products of negligible or no interest to young people. Brand recall, therefore, is not necessarily reflected in usage.

Young people can readily recall brand names of products as diverse as motor cars and soap powders. This does not mean that by the age of 15 they will be heavy users of "Honda" or "33" or a host of other branded products, including cigarettes.

8.10.0 Conclusion

8.10.1 In a territory such as Hong Kong, with its record of open trading and freedoms, the fundamental principles of freedom of choice and freedom of speech outweigh any consideration of censorship.

8.10.2 If proponents of a ban on advertising are seeking a reduction in smoking, their recommendations should be accompanied by adequate evidence that such a ban would bring about a reduction in consumption or smoking initiation/experimentation by young people. Evidence of this nature quite simply does not exist.

8.10.3 On the contrary, the World Health Organisation in its 1987 Report on Tobacco Consumption of 25 European countries, reports that only five countries have shown a decrease.

None of these five countries has an advertising or sponsorship ban.

8.10.4 The recommendation to ban cigarette advertising and sponsorship ignores worldwide evidence that cigarette advertising and sponsorship activities do not promote increased smoking. These activities, however, are fundamental to commercial competition in the market place.

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

8.10.5 Tobacco advertising and sponsorship, which is regulated by the industry "Code for the Marketing of Cigarettes" and Code for Cigarette Brand Sponsorships", is not a significant factor in juvenile cigarette experimentation and the elimination of advertising will not affect young people uptake. The elimination of tobacco advertising is only a form of censorship that will remove product development information for smokers.

The issue of tobacco products advertising is a highly complex one with many variables involved. Any ban of tobacco products advertising would in fact have the unintended consequence of having no impact on consumption patterns, or removing the private funding of government health messages and of imposing a ban on communications for a legal product. This would go to the very heart of rights in a free society. It would represent a form of government censorship.

It would be a serious assault on people's rights to be informed about a product that they choose to consume.

8.10.6 An absolute conclusion cannot be reached as to whether cigarette advertising, with its attendant warning notices discourages young people from smoking, or on the other hand whether censorship fuels curiosity and subsequent use.

How can COSH or its advisors explains, for example, the marked contrast between Norway (total advertising ban), and Hong Kong (advertising in all media and probably the most vigorous market in terms of brand promotion), where the former has a smoking incidence of one or more cigarettes a week a the age of 15, more than three times higher than the latter?

8.10.7 An advertising and sponsorship ban intended to influence young people is in fact a very risky proposal fraught with quandary. It has been suggested that a ban has the potential to increase curiosity, encourage the rebellious and even increase young people smoking.

8.10.8 The majority of Hong Kong residents agree that cigarette advertising and sponsorship should continue.

8.10.9 Accordingly this Institute submits that Government should not ban tobacco advertising and promotion in Hong Kong but that it should consider a positive pre-researched Government programme of communication designed to discourage young people in Hong Kong from making a decision on smoking until maturity.

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

9.0.0 Recommendations to increase taxation and make special levies for sponsorship and anti-smoking activities.

9.1.0 Introduction

9.1.1 COSH recommendations 23 and 24 call for measures which are regressive, unfair and restrictive on freedom of choice.

9.1.2 Governments will continue to seek revenue from cigarettes. But a taxation policy which imposes punitive taxation in a selective manner is inconsistent with any fairness doctrine.

9.2.0 The Purpose of Taxation

9.2.1 The purpose of taxation is to fund Government expenditure. Current Government policy is directed towards a taxation system which ensures equitable contribution and benefit.

9.2.2 We contend, and we believe that most Hong Kong residents would agree with us, that it is inappropriate for Government to use selective taxation methods to modify personal behaviour. Sub-groups of society should not be expected to contribute disproportionately to the total revenue pool. Nor should selective taxation be used to penalise some people in the purchase of legitimate goods of their choice.

9.3.0 Social Costs

9.3.1 Science has not concluded that smoking causes disease or death. Even if the reverse were true, reviews of those studies which have claimed a disproportionate social cost have found them to be seriously flawed.

9.3.2 Mr. Alan Woodfield of Canterbury University New Zealand addressed the matter in a paper to a Wharton Applied Research Centre Conference "Analysis of Consumer Policy". Woodfield concluded : -

> "Since none of the literature on smoking regulation involves a complete or properly-constituted cost-benefit study, there appears to be no basis at present for the conclusion that efficient resource use requires a change in regulations towards the industry one way or the other." [1]

9.3.3 Two U.S. economic professors conducted an exhaustive review of data and studies that had claimed increased social costs through smoking. They stated : -

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Source: https://www.industrydocuments.ucsf.edu/docs/pphl0000

"We have not found a single paper in which the life-time medical costs of smokers were shown to be higher than those of non-smokers." [2]

9.4.0 Freedom of Choice

9.4.1 Selective taxation on a particular product severely interferes with freedom of choice.

9.4.2 The majority of smokers who give up do so without assistance and of their own free will. Those former smokers have exercised freedom of choice in smoking and freedom of choice in giving up. They should not be forced into a decision on personal behaviour by selective taxation.

9.4.3 There is no part that taxation should play in the individual's exercise of the right of free choice in relation to his or her use of tobacco.

9.5.0 Cigarette Taxation is Regressive

9.5.1 Cigarette taxation does not pass a basic fairness test. It is in fact incompatible with Government initiatives toward a equitable tax base.

9.5.2 A study in the State of New York revealed that smokers in low income families paid proportionately more in taxation than those in wealthy families. [3]

Hong Kong data on the demographic incidence of smoking also show that the burden of tax on tobacco products falls disproportionately on lower income groups.

9.6.0 Cigarette Tax Discriminates

9.6.1 Current taxation on cigarettes is such that around 750,000 Hong Kong residents are contributing more than their share of total taxes.

9.6.2 If this discrimination continues (having as it does a basis of claimed "social costs"), logic demands that Government should discriminate according to all allegedly unhealthy or risky pursuits.

9.7.0 The Level of Taxation

9.7.1 Each packet of 20 cigarettes taxes the smoker just under $4. Government revenue benefits by over $1 billion per year. Increases in the price of cigarettes have kept ahead of rises in the Consumers Price Index for many years, and the product is one of the most heavily taxed consumer disposables.

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9.8.0 Earmarked Taxes

9.8.1 Earmarked taxes of the "one-cent-a-pack" or "1% on revenue" type generally get swallowed up in consolidated funds. History has shown that whatever reasons are offered for increasing cigarette taxes and earmarking them, in the long term the revenue is not used exactly as was intended.

Appropriate examples are the New Zealand one-cent-a-pack levy, the old UK "Road Fund" and the Finnish Government's allocation of 1% of tobacco revenue for an anti-smoking programme in 1977. Those taxes were quickly diverted to general revenue requirements, thus the additional taxation raised selectively became a discriminatory tax. In New Zealand, in 1982, the Department of Health stated :

> "It is not possible to clearly identify the total expenditure on activities implemented or expended with funds from this source." [4]

9.8.2 Broad based taxes (the thrust of current Hong Kong tax directions) should be used to fund projects that serve the community as a whole. If these taxes cannot provide enough revenue, the fair choice is clear. The burden should be reduced for all taxpayers by adopting a policy of cutting Government spending. Or the burden should be imposed equitably by increases in broad based taxation.

9.9.0 Sponsorship - Freedom to Choose

9.9.1 The recommendation to ban cigarette sponsorship and then levy cigarette sales to provide funds for sponsorship is highly hypocritical.

If cigarette sourced sponsorship funds are acceptable (as the recommendation suggests they are) then cigarette companies should be permitted to allocate funds as they see fit (within the "Code for Cigarette Brand Sponsorships) and sporting and cultural bodies should be free to decide whether they will accept tobacco sponsorship.

9.9.2 A levy fund of the type recommended is a potential bureaucratic minefield. What would be the criteria for allocation and who would make the decisions?

The recommendation would result in Government intervention in society in a manner which would breach the principles of freedom to choose.

9.9.3 Cigarette company sponsorships are already bound by the industry "Code for Cigarette Brand Sponsorships", they

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are supported by the majority of Hong Kong residents and they play a valuable role in society.

9.9.4 Cigarette sponsorships have not been shown to increase smoking and the banning of these sponsorship has not been shown to reduce smoking.

9.9.5 If Government is to be involved in sponsorship activities then the funds should be broad-base sourced not selectively and discriminately gathered and deployed.

9.9.6 The commercial world and its relationship with society is such that both parties accept the right to exercise choice. Such decisions are not regarded as being unfair or discriminatory.

9.10.0 Conclusion

9.10.1 Any suggestion that smokers should be further discriminated against by selective and punitive taxation should be rejected : -

- The use of selective taxation to modify personal behaviour is inappropriate.
- Science has not established that smoking causes disease or death.
- Cigarette prices have kept ahead of the CPI.
- Smokers have not been proven to impose more social costs on society than non-smokers.
- Smokers should not be expected to contribute disproportionately to Government revenue.
- The burden of tax on tobacco products falls disproportionately on lower income groups.
- Tobacco products are among the most heavily taxed "consumer disposable items".
- Total Government revenue from cigarette taxation already runs at over one billion dollars per annum.
- The right of sporting and cultural bodies to decide for themselves on sponsorship should be preserved in a free society.
- Government expenditure within society should be financed from the entire tax base not from discriminatory selective taxation.

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References 9.0.0 - 9.10.1

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2. Tollison, R.D., and Wagner, R.E., "Cost-Benefit Analysis and its Application to Smoking-Related Issues," 1978.

3. NY State Finance, "The Cigarette Taxation," James Savarese and Associates Inc., USA. (February 1983) p.4.

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10.0.0 Recommendations to extend the present restrictions for cigarettes to encompass other tobacco products.

10.1.0 Introduction

10.1.1 COSH recommendations 9 and 22 call for a wide range of requirements for tobacco products other than cigarettes.

10.1.2 If these recommendations are proposed against a background of an understanding of the size of the market represented by these products, they can only be regarded as unnecessary commercial harassment.

10.1.3 If they are proposed against a background of no understanding of the market, then some elementary research would have demonstrated that the recommendations are unworkable.

10.1.4 "Other tobacco products" is taken to mean pipe and roll-your-own tobaccos and cigars.

Almost all of these products are imported into Hong Kong from multiple sources and collectively represent less than 1% of the total tobacco market.

10.1.5 They are in turn broken down into a wide range of different products and brands.

Their impact is minimal, they are rarely advertised, if at all, and there would be a sufficient 'overflow' from the information requirements for cigarettes to effectively reach consumers of these other products.

10.1.6 It would be virtually impossible and certainly not economically viable for the manufacturers of these products to comply with Hong Kong law as it applies to cigarettes.

The production runs for this market are miniscule by international standards and suppliers would in all probability withdraw from the market if they faced uneconomical packaging requirements.

Accordingly the few selective consumers of these products would be unreasonably penalised.

10.1.7 It should also be realised that the product constituent deliveries of these products varies considerably from product to product and smoker to smoker. It would therefore be virtually impossible for constituent delivery information to be reliable or accurate.

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10.2.0 Conclusion

10.2.1 The minute share of market represented by this wide and varied range of products means that the recommendations are unwarranted and unworkable.

10.2.2 Any proposal which would deny consumers legal product availability should be rejected.

10.2.3 It is not the policy of the Hong Kong Government to dictate how its citizens run their lives and it is surely not the policy to deny consumers access to legal products of their choice.

10.2.4 Recommendations 9 and 22 if adopted could well result in this unacceptable policy being applied.

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Section 11

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11.0.0 A Recommendation to ban the sale of tobacco products to persons under the age of 18 years.

11.1.0 This refers to COSH Recommendation 13. This Institute would support both legislative and educative measures but puts forward its views in this section of this submission in the interests of exploring the issue and its ramifications.

11.2.0 Tobacco Industry Policy

11.2.1 Tobacco manufacturers and importers in Hong Kong do not encourage smoking by children. The industry considers that smoking is an adult custom, and that people are best able to choose whether or not they wish to smoke when they have reached adulthood.

The tobacco industry has taken action to ensure that the products are not steered to the young people. Under the industry "Code for the Marketing of Cigarettes", tobacco manufacturers and importers do not direct cigarette advertising towards young people (specifically defined in the Code as being under 18 years of age).

Even advertisements which would otherwise meet the restrictive requirements of the "Code for the Marketing of Cigarettes" are not used in media situations where they would be seen by a predominantly young audience.

11.2.2 People under 25 years of age are not depicted in cigarette advertisements, nor are celebrities who have special appeal for young people. Sporting, entertainment or other well-known people do not endorse cigarettes. All these restraints are observed by voluntary actions without the need for legislation.

11.2.3 Committed opponents of tobacco sometimes find it difficult to accept that cigarette brand advertisers can be responsible people and, instead, conjure up pictures of clever marketing intrigues supposedly designed to ensnare a ready supply of new cigarette-smoking children. Such notions are fantasy and are not reflected in Hong Kong's smoking statistics.

11.3.0 Why Do Children Smoke?

11.3.1 The literature on this subject shows that few definitive answers have been found and certainly no simple, straightforward explanation given, as to why some children try smoking.

11.3.2 The preponderance of evidence indicates that the influences appear to be varied and complex and almost certainly do not include cigarette advertising, sponsorship or availability of the product.

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Reasons propounded vary from curiosity to a declaration of independence; from a desire to conform within an age group to an expression of unconventional, anti-social attitudes : -

> "The main reason why children try their first cigarette is curiosity, whereas the main reasons why they take up regular smoking are to appear tough and conform to the social habits of their friends." [1]
>
> "... by now (ages 6-12) the child knows that smoking generally is forbidden so that to the curious, there seems to be an added attraction to the affair of smoking, an early declaration of independence." [2]
>
> "The greatest influence in starting smoking, however, appears to come from friends of similar age." [3]
>
> "The motivation of young people to smoke came neither from advertising nor from the purchasing outlets." (vending machines) [4]

11.4.0 Education

11.4.1 Given its policy on children's smoking, it should be obvious that the tobacco industry in Hong Kong has no objection to schemes designed to discourage children from a decision on smoking until they reach adulthood.

The industry does submit however, that education programmes should be based on scientific facts, not opinions or presumptions. Educators should take special note of this point. If children's education programmes are not entirely factual, it is highly likely that older teenagers, as their decision-making ability matures, will rebel if they consider they have been misled.

11.4.2 The authors of a report on an Australian survey of smoking incidence in school children noted that efforts to reduce smoking were not achieving their desired goals and that they could well be ineffective, insufficient or even counter productive. [5]

The possibility of counter productivity seems quite real. Some research suggests that the rebellious one syndrome may prevail. The "boomerang" effect, as it is sometimes called, is known to occur in instances where children are harassed to the point of rebellion.

11.4.3 An over-emphasis on smoking education may also create the impression that non-smoking is the panacea for all ills.

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Priorities need to be established, particularly in the light of increased drug taking and alcohol consumption.

11.5.0 Legislation

11.5.1 Legislation which formerly banned cigarette sales to young people in New Zealand was repealed in 1981 (without any prompting from the tobacco industry) when the Police Offences Act (1927) was modernised. The ban was regarded as unenforceable and placing an inappropriate burden on retailers. Its repeal was supported by the police officers of the day. The law was reintroduced in 1987 but no new trends in minors smoking are yet evident nor is it clear the Law is being enforced. It is widely held that laws banning cigarette sales to minors are unenforceable and a number of countries do not have such a law.

11.5.2 Nevertheless, the tobacco industry would have no philosophical opposition to legislative prohibition on sales to youngsters and would support legislation with an appropriate communications campaign.

11.6.0 Conclusion

11.6.1 Perhaps young people will continue to experiment with cigarettes just as they do with numerous other social customs, no matter what action is taken or not taken. The Hong Kong tobacco industry's established policy on young people and smoking is that the industry does not condone smoking, nor does it encourage young people to smoke.

11.6.2 The Hong Kong tobacco industry is quite prepared to discuss the matter with Government and to consider support for Government initiatives which may be decided upon.

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References 11.0.0. - 11.6.2

1. Nye, P., "What Encourages and Discourages Children to Smoke," NZ Medical Journal June 1981, p 432-434.

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3. Ashton, H., and Stepney R., "Smoking: Psychology and Pharmacology." (Tavistock, London, UK.) 1982, p 43.

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5. S.R. Leeder, J.K. Peatt, A.J. Woolcock, "Cigarette Smoking in Sydney Schoolchildren Aged 12 to 13 Years : 1971 to 1975." Medical Journal of Australia 5 March 1977,p 325-329.

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12.0.0 A recommendation to ban smoking in any advertisement of any kind.

12.1.0 Introduction

12.1.1 COSH recommendation 19 proposes an iniquitous interference in the affairs of all advertisers and reflects a complete intolerance with anything to do with smoking. The recommendation, in fact, represents a form of censorship which would be foreign to Hong Kong and which would set a sinister precedence.

12.1.2 Anti-smokers are entitled to their views but they must accept that for most citizens smoking is a part of real life and that discrimination or censorship is not a desirable element for Hong Kong society.

12.1.3 Advertisers are entitled to depict real life situations in their advertising and if they wish to depict smoking, so be it.

12.1.4 If Government were to bow to this type of pressure, how would it react to other pressure groups who would prefer to see the removal from lawful communication of products or pursuits which they find objectionable.

Are we to have restrictions which would ban drinking, underwear, romance, fatty foods, fur coats, fast cars, motorbikes, etc. in advertising? A mature attitude to real life says "no".

12.1.5 Conclusion

12.1.6 Smoking is legal, is acceptable to society at large and is visible in real life. To deny any advertiser the right to depict, in good taste, a part of real life is nothing more than censorship.

12.1.7 The sinister implications of this recommendation and the precedence it would set should be recognised and the proposal rejected.

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13.0.0 A recommendation to increase the size of the warning notice in cigarette advertisements.

13.1.0 COSH recommendation 10 demonstrates that some opponents of tobacco will not be satisfied until anything to do with smoking is defaced.

13.1.0 The recommendation, in fact, suggests that cigarette advertisements are not well read. Why else would a call be made for 20% of a brand message to be devoted to a warning notice.

13.1.1 The warning notice is in place now. Its specifications are such that advertisers already contribute 10% of the cost of a printed advertisement to a Government warning.

13.1.2 And the warning is noted. The majority of Hong Kong residents agree that the present warning on cigarette advertisements is clear enough.[1]

13.1.3 Furthermore, the proposal to place the warning at the top and bottom of any advertisement is a clear intention to denigrate the legitimate communication of a legal brand of product.

13.1.4 <u>Conclusion</u>

13.1.5 World wide trends clearly indicate that some people will continue to smoke. And those people are entitled to legitimate communications for a product they choose to enjoy. Government has decided that such communications should carry a warning notice.

This is done and the majority of both smokers and non smokers agree that the warning is clear enough. [1]

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(1) Survey on attitudes to smoking and related issues in Hong Kong. Survey Research Hongkong Ltd., September 1988.

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